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THE CANCER SITUATION AS THE LAYMAN SHOULD SEE IT.*

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NEW ORLEANS.

Half a million people die annually from cancer. Over the age of forty-five only heart disease exacts a heavier toll. Last year, according to the statisticians of the Metropolitan Life Insurance Company, it was responsible for nearly 14 per cent more deaths than it caused twenty years ago. It is certainly not decreasing, and responsible observers believe that it is showing an increase which cannot be explained on the grounds of either a longer span of life or a more correct certification of the causes of death.

The chief tragedy of this tragic situation is that certainly 50 per cent, possibly 75 per cent of these deaths are totally unnecessary. This tremendous wastage of human life is preventable, at least in certain types of cancer, in from half to three-quarters of all cases. It is due to just two causes, ignorance and delay, both of them inexcusable causes, both of them remediable causes, provided only public and profession league themselves against their common enemy. That is the reason for such meetings as this, that the medical profession may share its knowledge with lay people, may teach them what cancer is, as far as they themselves know, may instruct them how to prevent its occurrence, how to act when once it has developed. We have no desire, as a brilliant English surgeon puts it, to scare you to death; our aim is rather to frighten you into life.

Let us frankly grant that in many respects cancer is still an unknown disease. Its actual cause of origin is still hidden from us. At best we can only define it as a lawless growth of body cells, a sort of anarchic multiplication on the part of structures normal in themselves but no longer obedient to the laws of normal growth, no longer growing in their normal environment, and having a fatal ability to multiply rapidly, to invade surrounding tissues, to reproduce themselves in other parts of the body with the same characteristics exhibited at the point of origin, and to generate toxins or poisons which eventually kill the host.

Now there are several important points to be noted in connection with the origin of cancer. We may not know the nature of the limiting substance whose loss we assume to be responsible for its lawless growth, but we do know that cancer, practically without exception, is always preceded by chronic irritation, and chronic irritation extending over a long period of time. It has been proven experimentally, chiefly in mice, and it has been proven many times over by the clinical observation of human beings. Cancer of the skin can be traced to unhealed sores, to ulcers, to scar tissue, to certain warts and moles and to similar lesions. Cancer of the lip and jaw and tongue is caused by excessive smoking, by burns, by bad teeth, by mouth infections. Cancer of the stomach and

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other portions of the gastro-intestinal tract is preceded by indigestion, by ulcers, by constipation, by diarrhea, by bleeding hemorrhoids. Cancer of the breast follows bruises, lumps, discharges from the nipple. Cancer of the genital organs is preceded by obstetric injuries and by infections.

To give you more specific illustrations, dye workers develop cancer of the bladder because their urine is tainted with dye. Chinese men develop cancer of the esophagus because they eat at the first table and get their rice hot; Chinese women never develop it because they eat at the second table and get their rice cold. The people of Kashmir develop a certain type of cancer of the abdomen from repeated burns caused by the baskets of warm coals which they carry next to their bodies in winter. There is a certain kind of cancer of the mouth which comes from chewing the betel nut. Paraffin and oil workers develop cancer of the skin. Miners in cobalt mines develop cancer of the lung. And so it goes. Always chronic irritation of some sort precedes the actual development of the cancer itself, and it stands to reason that the removal of this chronic irritation, the correction of these precancerous conditions, will prevent the development of cancer in the vast majority of cases.

Another thing I would have you note is that cancer always begins as a local disease, never as a blood disease or as a constitutional disease. Since this is so, it follows that the removal of the growth while it is still local will mean in most cases absolute and permanent cure. We prevent the spread of smallpox by the isolation of single cases. We prevent an epidemic of scarlet fever by strict quarantine. In exactly the same way we can prevent the spread of cancer by the removal of its point of origin, provided it has not yet extended beyond that point. If we can put out a beginning fire, we are not likely to have a general conflagration.

Again, cancer is not a contagious disease. It cannot be transmitted by contact from person to person. There is not a single recorded case in which a physician or a nurse or anybody associated with a cancer patient developed the disease from contact, and surely, if it were a contagious disease, there would be thousands of such cases. Senn, a very great American surgeon, proved this by a series of experiments on his own person. He cut pockets in the skin of his arms and grafted cancerous tumors into them, but none of the tumors grew and he finally died of heart disease many years later. So you need not fear that you will develop cancer because you associate with a person who has it.

Nor is cancer hereditary. It does not pass from parents to children, it is not transmitted from generation to generation. Undoubtedly there are families in which there have been several cases of cancer, but in a disease as frequent as this the law of averages is a perfectly simple explanation of that fact. Life insurance companies, whose finances are very seriously influenced by the mortality of cancer, pay little attention to the hereditary factor, and scientists who have studied the matter will go no further than to say that possibly a susceptibility to the disease or an immunity against it is inherited, though they all agree that the disease itself cannot possibly be inherited.

Cancer, most unfortunately, has no characteristic symptoms and signs. Its manifestations are always those of the special organ affected, and are precisely the same as the manifestations of diseases of that organ which are not malignant. Chronic indigestion, rectal bleeding, vaginal discharges, lumps in the breast, discharges from the nipple, unhealed superficial sores, there is nothing characteristic, nothing alarming about any of these things, though any one of them may be evidence of an existing cancer in some special part of the body. Remember, above all, that there is nothing painful about early cancer, and that that is the chief reason people die of it. If it began like a jumping toothache,

somebody has said, there would be no deaths from it. But it does not, it begins with signs so simple people ignore them, and the fact that it causes no pain until it is so far advanced that a cure is impossible in most cases is the most treacherous thing about it.

We can defend ourselves against it, therefore, only by investigating all symptoms, especially when we have passed into the so-called cancer period of life, or, better still, by periodic examinations before symptoms develop at all. We must realize that every departure from the normal, every evidence of the abnormal, every perversion of function, must be promptly investigated, because while it most often is of minor significance, it may be the first indication of malignant disease.

More specifically, there is an infallible method of recognizing cancer, at least accessible cancer, and that is by microscopic examination. The physician who does not, in every possible case, remove tissue and subject it to microscopic study, who proceeds to treatment without examination, is not a safe physician. When cancer is not accessible, then we must resort to other aids in diagnosis, chiefly the roentgen-ray and the exploratory incision. The clinic in this country which shows the highest percentage of cures for cancer of the stomach is the clinic in which persons in the cancer age with vague digestive symptoms are promptly operated on, frankly as a diagnostic measure. This means that if cancer does exist, it is seen early, when surgery gives a high percentage of cures. It may seem to be radical treatment, but surely extreme measures are justified against an enemy which knows no laws.

The treatment of cancer is rather beyond the scope of my paper, but let me point out to you that some sort of treatment is always necessary, for cancer does not cure itself and nature is powerless against it. The microscope, as one of our greatest pathologists has pointed out, never reveals a defense mechanism in cancer. What the form of treatment shall be, surgery, irradiation, a combination of the two, or merely palliative measures, is dependent upon the stage of the disease, the location of the growth, the condition of the patient, and other factors to be determined by the physician. The important thing is that treatment be instituted and that it be instituted promptly.

Better than treatment, however, is prophylaxis or prevention. The correction of chronic discharges, the removal of chronic sores, the elimination of chronic irritations, will reduce the incidence of cancer and thus reduce its mortality. To give but a single illustration: it has been established beyond all doubt that childbirth injuries are predisposing causes of cancer of the neck of the womb; more than 95 per cent of women with malignancy of the uterine cervix exhibit such injuries. But in a study of some five thousand cases, made by Graves of Boston, of women who had had the injuries of childbirth repaired, there were only four instances of cancer, and in two of these the operation had been so badly done as to defeat its own purposes. Such illustrations could be multiplied and they carry their own lesson.

A word as to cancer cures: flee from them as you would from the plague, for death stalks in their wake, whether they be the products of wicked or merely of foolish men. There is no specific cure for cancer and there will not be until it can be traced to a specific cause or to specific causes. Moreover, when that cure has been discovered, it will come to you through the medical profession and its publications, not through the columns of the lay press. Newspapers have much to be responsible for in their ill-advised blazoning to the world of unsound and half-baked schemes which can do nothing but rouse false hopes and which do actual harm in that they delay the institution of proven methods of treatment. Such success as these cures do achieve, says W. J. Mayo, comes from the non-cancerous

lesions which they remove in the name of cancer, and he adds that if all fools were knaves, the situation would be simplified. Scarcely a year passes that we do not witness at least one wave of hysteria, thanks to the public press and its advertisement of some new cure, and how many additional deaths are chalked up to the score of cancer because of that hysteria no one will ever know. Remember that no drugs and no salves can cure cancer, that surgery and irradiation are the only two methods which can avail against it, and that even they must not be regarded as successful until a specific period of time, a minimum of five years, has passed without recurrence.

Cancer is truly the Captain of the Men of Death, but I think I have made it clear to you that whether or not it shall remain in that commanding position rests largely in the hands of the public: the medical profession cannot cure people who will not submit themselves to examination and treatment. This is a disease whose origins we do not know but whose predisposing causes we know perfectly and know to be largely preventable. This is a disease which always begins locally and which in its local stages is curable in possibly 70 per cent of all accessible cases. This is a disease which owes its appalling death-rate not to its intrinsic virulence chiefly, but to fear and ignorance and consequent delay. This is a disease whose early symptoms mimic those of other diseases which are not malignant, and it is a disease which never, until its late stages, is accompanied by pain. If these facts are borne steadfastly in mind, if the public will learn to face them rather than, ostrich-like, bury its collective head in the sand, then the conquest of cancer, even with our present imperfect knowledge of its origins, will not be long deferred.

THE CANCER PROBLEM FROM THE PUBLIC STANDPOINT.*

ARTHUR VIDRINE, M. D.,

NEW ORLEANS.

I suppose you are going to hear quite a repetition of what has been said before concerning cancer because we cannot emphasize some of the facts that have already been brought out too much. It is very necessary, indeed, that they be impressed upon you sufficiently that they will not be forgotten, and that you will heed our warnings and rules in the prevention of cancer.

We have assembled here today to discuss that dreadful disease which is undoubtedly one of the most important that we have to contend with. Since we are so selfish as to invite the public only once a year to participate in such discussions, I am going to be equally selfish this morning in limiting my remarks to a general discussion of this subject in such a way that it will be thoroughly understood by the public.

We physicians have our hospital staff meetings, we have our parish meetings, our district meetings that meet frequently during the year where we have ample opportunity to discuss all of the scientific questions that might come up concerning cancer. But you people only have an opportunity once a year of hearing a discussion of this dreadful disease.

We really do not know how many people in this country are suffering from cancer. It is not a disease that is discussed at card parties, dinner dances and sewing clubs. It is discussed only in whispers and with utmost secrecy with the members of the family and the physician, unless it is visible. The only means we have of finding out or observing the great number of these poor unfortunates is when the press carries out long, fascinating stories about some wonderful cure. The immediate pil-

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grimage from all parts of the country to that particular point is remarkable and astounding, and it is only under such circumstances that we can ever arrive at any fair estimate of the great number of cancer sufferers in this country.

On that point, we could paint for you more gruesome and more pitiful sights than your own imagination could picture at any time even in its wildest dreams, but that is not our purpose here today. We are not here to paint to you any of these pitiful sights. We are here to try to give you real information which will be of value to you.

We do know, however, that over 100,000 people in this country die of cancer every year, and we do know that the greater percentage of these victims are women. Why? Because the greatest frequency of cancer, aside from the stomach and the liver, is in the female genital organs and the breasts. Next in frequency are the intestines and the peritoneum, and then the skin. Even if it is a little more frequent on the skin in men and almost equally as frequent in the stomach and liver in both sexes, the female in addition has to contend with the various susceptible genitive organs and her breasts.

What are the causes of this terrible condition? Many theories have been advanced but they have all fallen by the wayside and had to be abandoned. We may consider among these theories, first of all, that of heredity. That theory, my friends, has been disproved. Cancer is not hereditary. Still, it is my personal opinion that there exists in certain individuals a certain predisposition to the development of cancer. This condition has been observed in several members of the same family who develop cancer in the same anatomical location, such as the liver and the stomach. It is unquestionably true, also, that there are certain types of skin that are susceptible to cancer and that can be observed in certain families. Of course, I admit that there are a great number of physicians who object conscientiously to this theory or this idea, but I feel that more careful family histories will in time prove to them that that idea is correct.

Another theory that we might consider is the parasitic theory. Many investigators have worked for a number of years on this problem. The latest adherents to it were London scientists, but there is nothing to substantiate it and it had to be abandoned. That theory, however, produced many very fascinating and interesting views, as we always find in investigations and treatment of cancer. One of these views was the contention of Blumenthal that he had isolated three distinct bacteria which caused cancer in mice and rats, and that these bacteria and the cancer could be transplanted. That, however, could not be confirmed by later investigations.

Another very fascinating one was the placing of the whole cause of cancer upon the cockroach. That was disproved, however, when it was found that the cockroaches carried parasitic worms which attacked rats, and that long irritation due to the presence of the parasitic worm in the rat's stomach might finally produce cancer. It was further discovered that these worms did not attack the human being. Therefore, that theory had to be abandoned and the poor cockroach had to be exonerated of that terrible charge. Some of us might think it is regrettable, indeed, that this theory didn't last any longer because if it had lasted longer proofs would have been started against the cockroaches and probably our kitchen sinks would be blessed with the absence of these hungry little creatures.

A third theory was the chemical theory. Chemists of great distinction labored for years trying to discover a chemical cause for cancer. They brought forth substances which they thought were characteristic of the new growth, but none of these substances received the sanction of unqualified approval. Careful analysis of the cancer cells did not bring out any substance to

which could be attributed the cause of malignancy.

The fourth theory was the glandular deficiency theory, and that may be classified under the chemical theory because it consists of a supposed deficiency of certain hormones in certain glands of internal secretion. Various sera and extracts have been prepared and tried, but we shall consider these later under the subject of treatment.

Since we do not know the actual cause of cancer, what are we going to do about it? We must, then, try to find out the very closest we can to the actual cause and therein we find our predisposing causes. I feel that we should try to understand these predisposing causes very clearly because therein lies the secret of the prevention of cancer. After all, you know, the prevention of cancer is the best cure.

What are these predisposing causes? First of all, I might say that they are all essentially due to some local irritation. We might have irritation due to some old, unrepaired scar. Second, we might have irritation due to some chronic inflammatory disease. Any scar on any part of the body if not repaired and treated properly might finally alter the anatomy and the function of the tissue cells in such a way that they will degenerate into cancer cells.

One of the most important examples of that is the laceration of the cervix or neck of the womb in the female. Why is that of such great importance? Listen to these figures. In all cases of cancer in the female, one-third are a cancer of the uterus. Ninety per cent of all cases of cancer of the uterus, or cancer of the cervix, and 95 per cent of all cases of cancer of the cervix occur in women who have borne children.

The explanation of that fact is that childbirth practically always causes some injury to the cervix. It may be slight or it may be marked, but at any rate prevention would consist in the repair of these scars. It is very imperative, then, that all lacerations of the cervix should be repaired either at once by the obstetrician or later by the gynecologist.

Irritation due to chronic inflammatory disease, aside from contributing to cancer of the uterus, is a very important predisposing cause in cancer of the lip, of the skin, of the tongue, of the stomach and liver, of the intestines, and of the rectum.

One per cent of all deaths in this country is due to cancer of the skin. Two per cent of all skin diseases are cancerous. It is slightly more frequent in men than in women. It is exceedingly rare in the negroes. It is more prevalent among the blonds than the brunettes, and more common in the country districts than in the city districts, undoubtedly due to the excessive sunlight as well as irritating dirt in the country districts.

Occupation has a great influence on the cause of cancer; for instance, laborers at work in factories where highly irritant chemicals are used. You have also read of the physician's cancer of the hands and skin, especially in physicians who were early workers in this disease.

Prevention, then, my friends, would naturally consist of the protection of these people who are exposed to these irritants, protection of these people from chemical irritants, protection from the sunlight and irritating dirt, and also the removal of certain pigmented skin moles which may also develop into cancer. Especially is that true in men over forty years of age.

Another condition which may result is cancer of the stomach. Before we go to the stomach, let us consider the lip. Cancer of the lip is an unnecessary condition. It is oftentimes due to irritation caused by a ragged tooth, and it may be due to irritation from a badly fitting bridge; but particularly is cancer of the lip due to errors in smoking. There is a certain art in smoking, and he who becomes so unartful as to permit a cigar stub that is too short, a cheap

pipe stem or moist cigarette paper to stick to his lip until it irritates it, then there is danger of developing cancer.

I wish to state that in cancer of the stomach, which is 45 per cent of all cancer, you also have as a predisposing cause chronic inflammatory diseases as gastric ulcers, ulcers of the pylorus, any chronic gastric disturbance or irritation. Also, that is true of skin.

In the treatment of cancer, I might say that drugs have been used in the time of the ancient Arabs and Egyptians who used arsenic. Since that time, the salts of various other chemical substances have been used including colloidal gold which I understand is still being used by some of our colleagues, but which has been demonstrated time and again to be of no value. Blaribell revived the old lead treatment which was used during the time of Galen and Goulard. The best he could secure from the lead colloidal treatment was the establishment in his mind of an imaginary feeling that the administration of that substance might cause more sensitiveness in the cancer cells to roentgen-ray and radium radiation. Radio active substances have failed to serve the purpose.

Vaccines have been made and tried, and they have fallen by the wayside. Various sera and extracts have been prepared from the omentum, thymus gland and other structures, but they have failed to prove of any value.

Of especial interest today, I might mention the Coffey-Humber treatment which is an extract prepared and used by these two distinguished physicians in the treatment of cancer. It is still in the experimental stage, admitted to be in the experimental stage by Drs. Coffey and Humber, and they as well as the rest of the medical profession maintain that it will be a good while yet before we can measure its value.

Therefore, having no specific treatment for cancer we must rely upon the only two accepted methods, surgery and radiation, radiation either by roentgen-ray or radiation by radium. The success of these treatments depend, as you know, upon the type, upon the location, the size, the age of the growth when the patient applies. Early cancer is curable if taken in the early stages provided of course that cancer has not been previously irritated by some quacks or some of these people who are especially empowered by the Almighty to treat cancer with arsenical and zinc plasters. For instance, surgical treatment of cancer of the lip early will give you 75 per cent cure. In early cancer of the breast proper surgical procedure will give you 90 per cent cure. In early cancer of the cervix, a properly performed operation will give you 70 per cent cure.

Now then, my friends, since we know that early cancer is curable, why wait? Why throw away your only opportunity for a permanent cure and sacrifice your life by going way out in the sticks somewhere to some former blacksmith just because that man tells you that he has been called away from his plow by the Lord to take up the more remunerative business of treating cancer?

If you notice a lesion on your skin of any kind which might seem abnormal, if you notice a lump in the breast, a retraction of the nipple, a discharge from the nipple, a lump in the arm pit, bleeding in women between menstrual periods after the age of thirty, bleeding after the change of life, you should at once report to your physician or your surgeon because therein lies the importance of a permanent cure of cancer and your life might be saved.

A NEW BANDAGE FOR TREATMENT OF FRACTURES OF THE PELVIS.*

E. DENEGRE MARTIN, M. D.,

NEW ORLEANS.

There is no doubt that the treatment of fractures has made great progress in the last twenty years, and well that it has, because of the numerous accidents occurring today we are forced to give the subject more study than formerly.

One of the advanced steps, and the greatest one, in my opinion, is that we are rapidly getting away from the use of plaster, which is an abomination in our climate. Especially is this true of plaster casts about the body. There was a time when nearly all fractures of the pelvis were encased in plaster and the patients kept on their backs for an indefinite time. By degrees, and possibly by accident, we learned that this was unnecessary. All that is really important in the handling of these cases, is to place the fractures in their normal position so far as is possible and to hold them in that position. Some go so far in fractures of the rami, or fractures of the anterior superior spine, as to keep the patient on the back without fixation of any kind. This will accomplish the same results, but my experience is that these patients often suffer discomfort when moving about in bed, and by the application of the sacroiliac belt, which I present to you, I find that they are at all times comfortable.

In multiple fractures, where there is mobility of the pelvis and deformity as well, and where these fractures have to be replaced by traction, this method can be used as additional treatment.

I have had within the last two years five cases of fracture of the pelvis, one extending into the acetablum, all of which have been treated by the application of this belt and all have been comfortable from the time of its application to the date of discharge. So comfortable have these patients found themselves in these belts, that they have always been anxious to replace them whenever removed of necessity.

There are, as you all know, numerous sacro-iliac belts. Most of these are made with elastic inserts, and my experience is that within course of time will become relaxed and will not give proper support to the parts. I am firmly convinced that these belts should be snug fitting and unyielding. I have used now over 50 of these on cases of sacro-iliac sprain alone and many of my friends throughout the country who have also used them report excellent results.

It was the firmness and snugness of these belts that induced me to use them in fractures of the pelvis, and I am reporting my results to you tonight hoping that you will be induced to use them, as I am sure they will give you the same results they have given me.

The belt is made of canvas. The material used in either light or heavy, and is chosen according to the demands of the case. It is like an ordinary belt, 5 inches in width, reaching from a line along the top of the anterior superior spine to a point below the trochanter major. The belt is held in position by two one-inch straps and buckled in front,—one a half-inch from the upper margin and one a half-inch from the lower. Cleats are fixed midway along the belt about 8 inches apart; through this is run a strap 1½-inch in width, coming just below the crest of the ilium. When this is drawn tight it takes up all of the slack in the bandage, which will always occur no matter how snug it is, and immediately fixes the pelvis overcoming any possible immobility. The great advantage of this is that any time the belt is a little loose it can be immediately tightened by pulling on the set of straps. This belt, which is its most important feature, can, of course, be added to any sacro-iliac belt.

Another improvement in the belt is the special way in which the leg straps are

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applied. These, you will see, are made of inch material, fixed to the belt at an angle on the side, and when fastened around the leg fit in the gluteal fold posteriorly and on either side of the pubis anteriorly, holding the bandage in perfect position and overcoming the annoyance usually caused by the leg straps cutting in the groin. Patients who are suffering acutely are relieved at once by the application of this bandage and are able to move around without fear of pain. This, in my opinion, is a step forward in treatment of pelvic fractures, as well as in the relief of sacro-iliac sprain.

I am indebted to Mr. R. H. Weber, of the Weber Surgical Appliances of New Orleans, for assistance in perfecting this belt.

DISCUSSION.

Dr. Paul A. McIlhenny (New Orleans): Dr. Martin has emphasized the bandage for support, especially immediately after reduction. The only way you can support such fracture is by circular restriction of motion in the pelvic joints. As he stated, there are many belts designed for this purpose. There are few of them that stay in position. By far the majority of them slip, becoming very uncomfortable and not supporting the pelvis at all.

Fractures of the pelvis, unless properly supported, are going to have later results in pain about the lower portion of the spine, especially the sacro-iliac synchondrosis. That is probably due to a strain or separation of the symphysis pubis; where you have marked separation of the pubis. You automatically have a derangement in the sacro-iliac synchondrosis, so this rigid sort of a bandage is necessary, not only until the fractured pelvis has thoroughly united, but for a considerable time afterward and until your pelvis and particular structures have had a chance to readjust themselves. A belt that slips is worse than no support; this bandage holds its position and fills the requirements necessary for adequate support in such conditions.

Dr. H. B. Gessner: I am rising to get a little more light. What did Dr. Martin say he uses until these belts are made? Another question is, what do these belts cost? I think that information would be of some value to us.

Dr. E. Denegre Martin (closing): I would like to answer by saying that we nearly always strap until we can have the belt made, if it is serious enough to require prolonged treatment. Many of these cases continue over a period of two or three weeks and very many of them recur, and we find that adhesive strips will last only three or four days. The belt costs $7.50. I believe if enough were made, they could be made cheaper. What I want is to show these belts to the doctors so they can have them made by their own manufacturers.

ROENTGEN DIAGNOSIS OF GALL BLADDER DISEASE.*

GEORGE M. STREET, M. D.,

VICKSBURG, MISS.

So much has been written on this subject in the past five years and it has been so thoroughly discussed by workers who have had vastly more experience with this work than I, that I almost feel that I owe you an apology for attempting to present anything to you on the roentgen-ray diagnosis of gall bladder disease. However, this subject is not nearly so ancient as appendicitis, and that still occupies a prominent place on most of our surgical programs. It is always worthwhile to give one's personal opinions on any subject, no matter how common the subject may be, and thereby stimulate a general discussion that will bring out many valuable points. The purpose of this paper is not to discuss the details of the technic of cholecystography, but simply to discuss a few important points in connection with the diagnosis of gall bladder disease with the aid of roentgen-ray studies.

Previous to the work of Graham, Cole and Copher, diagnosis of gall bladder disease by roentgen-ray findings was difficult and uncertain. Only in those cases in which calculi were actually identified, were we positive in our findings. Even stone shadows were at times uncertain, as they could have been either gall stones or renal calculi. So-called shadows of the thickened gall bladder were at times correct but always doubtful. Secondary or indirect findings when studying the gastro-intes-

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tinal tract with the opaque meal were of value and are also of value today, but not so constant and reliable as the findings when cholecystography is done. The indirect signs of cholecystitis should always be borne in mind when gastro-intestinal study by the opaque meal is being done and every case should have the benefit of both methods of study.

With reference to the method of administration of the tetraiodophenolphthalein, authorities still differ. There are those who insist that the oral method is as good as the intravenous, and there is little doubt that the oral administration is quite satisfactory in the majority of the cases. We still believe that the intravenous method is superior and more uniformly satisfactory. If you wish to use the oral method, your results will be more uniform by using the dye in solution and given in fruit juice, preferably grape juice, than by the use of the capsule. This has been demonstrated by many observers and it is confirmed by our own experience. Given in solution, the dye is absorbed more rapidly and more completely, and that which remains in the intestinal tract is not in lumps and does not give confusing shadows.

In regard to the interpretation of the films, we are all familiar with the very positive findings. Complete absence of the gall bladder shadow in a satisfactory film following the intravenous injection of the dye, means that the patient either has no gall bladder or that it is diseased. There have been a few cases reported in which the abdomen has been opened in expectation of finding cholecystitis and in which there was no gall bladder. We have never encountered such a case. The next positive finding is the identification of stones, by either positive or negative shadows. Then comes that large group of cases, about which so much has been written, with the pale filling, or the delayed emptying, or irregularities in contour of the shadow. Early in our work in this line, we thought that it was a comparatively simple problem, that of differentiating normal from abnormal gall bladders by the character and density of the shadow. However, the more experience we have with these cases and the more opportunity we have to check our cases with operative findings, the more conservative we become in condemning gall bladders with faint shadows.

To me, the principal thing we have to determine in evaluating a cholecystogram in this group of cases, is whether or not the gall bladder has the ability to concentrate the dye. I am inclined to believe that if we obtain a definite shadow of the gall bladder at any period, I don't mean the shadows that are published as normal shadows but practically any shadow, this should be interpreted as a normally functioning gall bladder. The thickness of the patient and the position of the gall bladder must always be considered in the given case with reference to the density of the shadow.

Deformities of the gall bladder shadow do not always mean pericholecystic pathology and adhesions unless as in the exceptional case, the deformity is constant and the gall bladder lies in the same relative position through the examination. We have seen a number of cases with deformity of the gall bladder shadow come to operation and find a free gall bladder. On the other hand, we have seen cases in which there was normal contour of the shadow and at operation find it buried in adhesions.

In connection with the slowly emptying type of gall bladder, I would like to mention a group of cases we have encountered in the past few years. In these the gall bladder shadow was abnormally large and of normal density. The emptying time was greatly delayed. The patients presented the clinical picture of chronic cholecystitis. At operation, the gall bladder appeared normal, but large, the common duct was distended and large, no stones were palpable, the head of the pancreas was

moderately thickened and enlarged, and it seemed that the thickened pancreas was causing a partial obstruction of, or rather an abnormal back pressure, in the common duct. In five of these cases an anastomosis between the gall bladder and the first portion of the duodenum was done. These cases in which this operation was done have been followed from one to four years and relief of the digestive symptoms has been obtained.

Before closing this discussion, I would like to call your attention to the recent development of a liver function test which can easily be done simultaneously with cholecystography. By using phenoltetraiodophthalein, the isomer of tetraiodophenolphthalein, intravenously, the test is accomplished briefly as follows: 12 cc. of blood is withdrawn one-half hour after the dye has been injected, the blood is allowed to clot and the serum to separate by gravity in an ice box overnight. The percentage of dye in the serum is determined colorimetrically by comparison with a set of standard tubes. A retention of less than 12 per cent of the dye in the blood serum in the one-half hour specimen, or less than 4 per cent in the one hour specimen, is considered normal. The greatest retentions are in patients with cholangitis and hepatitis. The amount of retention may be as high as 80 to 90 per cent. The value of this test is self evident, when the liver function is seriously impaired, the prognosis is grave if we are contemplating surgical intervention.

In conclusion, based on personal observation and experience in this work, I would summarize the few points discussed as follows:

1. The intravenous injection of the dye gives more uniform and reliable cholecystograms. It also has the advantage of giving you the opportunity of using a dye that stains the blood serum and thereby allows a liver function test to be done at the same time.

2. If you prefer the oral method, do not use the capsules. The dye in solution and mixed with grape juice is more satisfactory.

3. More evidence than a pale filling gall bladder is necessary to make a diagnosis of cholecystitis.

4. Deformities of the gall bladder shadow do not always mean pericholecystic pathology or adhesions.

5. With a large gall bladder shadow and delayed emptying, always bear in mind the possibility of either pancreatitis with partial obstruction of the common duct, or a stone in the common duct which is not completely blocking the duct.

6. Much is yet to be learned about the interpretation of cholecystograms, and we should all avail ourselves of every opportunity to carefully check our roentgen diagnoses with the diagnoses made at the operating table and by the pathologist.

DISCUSSION.

Dr. D. M. Moore (Monroe, La.) I am one of those that prefer the oral method. I use it exclusively, and I get rather uniform results in my gall bladder cases. There is one thing that Dr. Street did not mention in interpreting negative shadows that I think plays a very important part, and that is the degree of absorption in the intestinal tract. A number of these cases are desperately ill, acutely so; give them the dye and it will go right on through the intestinal tract without any absorption or any shadow. Arriving at a diagnosis of a diseased gall bladder under such circumstances is eminently unfair and of course in error.

Another condition that I find—and I am not prepared to say just what the intravenous method would do—and that is patients that come in jaundiced. In my hands I have yet to get a complete filling of the gall bladder of a jaundiced patient. They will not fill up in my hands.

Dr. H. G. McCormick (New Orleans) I do not care to say very much on Dr. Street's very excellent method, but I use the oral method because it is more convenient to use that, but I think you have to be very careful in your check up, for instance I get the patients to be sure, if they vomit, to notice if there is any undissolved capsules, or if they have dysentery or bowels act,

to see if there is any in the stool, and just before I make the picture I take a large picture of the entire abdomen to see if there is any undissolved capsules in the intestinal tract, or how many; then if I do not get a picture of the proper density, I think it is because all of the dye has not been absorbed; taking it that way it is a pretty sure way.

Then another thing—about the density. Of course the examination is really a functional test and not a diagnostic one of the gall bladder. I do not think there is much value as to the density of gall bladder shadow at the various hours unless every picture is taken with exactly the same technic, the patient is exactly the same at each exposure, the tube the same distance and all the factors the same; then I think you can place some reliance on the density of the shadow.

Dr. E. E. Benoist (Natchez) I did not come here prepared to discuss this paper, so I really won't try to say much. I think this is one of the most interesting papers I have listened to since I have been here. When gall bladders do not show up, where the dye has been given effectively, it is because the gall bladder is simply a negative quantity so far as its function is concerned. If the wall of the organ is so diseased that the lymphatic drainage and blood capillaries are almost blocked on account of the great thickening of the gall bladder wall, there is not going to be much chance of the dye getting in to show the gall bladder. I can recall two cases that would illustrate that. One was a case of large cystic gall bladder where there was not so much inflammation of the wall of the gall bladder itself, but the cystic duct was completely blocked and the gall bladder was completely filled with a more or less bile free mucillaginous material. The gall bladder was removed. All symptoms cleared up at once.

Another was a case of carcinoma, the origin of which was not determined at all, but involving the cystic and common ducts and part of the duodenum. The patient had marked jaundice and in short it was one of those cases where no active treatment would have been of much value. I think Dr. Street will agree with me that if you have a case that looks like a case of gall bladder disease regardless of what your dye shows, the best thing to do is to operate if you have symptoms enough to back up your findings.

Dr. R. C. Finlay (Greenville) We, in Greenville, very much prefer the intravenous method of administration. In cases previously given dye by mouth we find a different result. If there is any reason why the patient does not want to take the intravenous dye, it might be given orally, and given a negative diagnosis it might be repeated intravenously. As to choice of dye, the new dye is very much to be preferred to the old dye. There is not as much disturbance. Another thing came up recently about the matter of liver function. It might be affected by the metabolic rate. All the blood does not pass through the liver each trip, and with quickened circulation you might be expected to get more blood through the liver than normally.

Dr. George M. Street (closing) Dr. Finlay just answered the question that Dr. Moore brought up with reference to the intravenous and oral dosage. Where patients object to the intravenous injection at the first examination, and the gall bladder fails to fill, we never feel that we have had a real test until we give that patient the intravenous injection. We have had several cases on record where there was no gall bladder shadow after the oral dye, and we gave the intravenous and got a perfect filling, and for that reason all cases that do not object to it get the intravenous to start with, because if you get no results after the oral, we have to go on and give it any way before we feel satisfied.

With reference to getting gall bladder shadow in jaundiced patients, I remember definitely getting a perfect gall bladder filling in two very definitely jaundiced cases after an intravenous injection. We do not ordinarily give the intravenous injection, but give the dye by mouth in cases where they are very sick when they are jaundiced, but where it is chronic jaundice and they are not extremely ill, we use it.

With reference to the point of operating whether the gall bladder fills or not, if you give the dye and get no gall bladder filling and the cystic duct is blocked, or the walls of the gall bladder are in such condition that they do not concentrate the dye, or the dye does not get into the gall bladder, that is a positive indication of cholecystitis. The filling of the gall bladder, the more normal it is, the more certain we are that there is no gall bladder disease. The most positive evidence of cholecystitis or disease of the gall bladder that we have, other than seeing the stones, and even more positive than that, is the total absence of the gall bladder after an intravenous injection of the dye. That is positive proof that the gall bladder is not functioning and, therefore, is diseased.

SURGICAL MORTALITY: ITS MEANING FOR THE OPERATOR.*

WILLARD BARTLETT, M. D.,
and
WILLARD BARTLETT, Jr., M. D.,
ST. LOUIS, MO.

We can improve our results by a study of our failures. We have gone back a few years into a detailed analysis of our last 100 deaths in hospital. The results have been of real benefit to ourselves and it is our hope that they will prove of value to you.

There were 69 deaths after operation and 31 patients died without operation. We are trying to learn from this study just how many of the former would inevitably have come under the latter grouping if we had not "committed surgery" on them. It is all very well to say that one cannot spoil a bad egg, but we intend to do less surgery on dying patients in the future.

Of the 100 deaths, 37 occurred in thyroid cases (about 50 per cent of our work is on goiter). Of these 37, 14 or nearly 40 per cent, came in and died before operation could be done. This in the days of Lugol's solution, which has been hailed as such a life-saver. All these patients had had Lugol's solution in varying doses before entrance. Just remember that.

We have had a fairly even distribution of deaths through decades among the goiters. It must be remembered that they are not computed in reference to the numbers of goiter patients seen in these age groups.

Fourteen non-operated thyroid patients died. How? Below 50 years of age, 3 died of complications of the disease and 6 in crisis; over 50 years of age, 4 died of complications and 1 in crisis. A nice exposition of what happens to patients who procrastinate or are kept on alleged medical treatment until they have got past their prime of life.

We will observe the durations of known goiter and of toxic symptoms in the 14 non-operated goiter deaths: Up to 30 years duration of goiter and up to 3 years duration of thyrotoxicosis. A doctor had been treating these patients in nearly every case. Some of the patients, of course, would not consent to an operation when it could have been done safely. Some had never been advised to have operation.

Twenty-three patients died after thyroidectomy. Seven died in thyrotoxic crisis, 6 of afebrile circulatory failure, and 10 of complications, most of which precipitated crises in patients who would otherwise have "got by." All these patients were prepared with Lugol's solution. Iodine is of great benefit in inducing partial remission immediately preparatory to operation; it hastens remission; such preparations cannot ever be regarded as treatment (in the sense of a curative measure) of toxic goiter and we have not been able to get a real iodine effect more than once. Other clinics report that they can. We wish we could; it would help a lot in handling the occasional recurrences.

Consider the details of the deaths after thyroidectomy and what happened to the 7 patients dying in crisis. Only one patient over 50 years of age, high metabolism, goiter present for many years in all but one, toxic for over a year in all but one, given 10-87 days hospital treatment before operation, which was a divided stage procedure in 3. But they died. Why? Sick too long in all cases and if the four who died after subtotal thyroidectomy had been done in stages they might have lived. It is clear that they had more surgery than they could stand.

Six cases of afebrile circulatory failure, all but one over 50 years of age. Their typical story is duration of goiter for many years with appearance of symptoms of toxicity for only a few months—elderly patients

* Read by the senior author before the Section on Surgery at the Sixty-third Annual Session of the Mississippi State Medical Association, Vicksburg, May 13, 1930.

with myocardia damaged insidiously for many years. Be wary of doing both lobes of large goiters at once in such cases. Divide the operation into stages if in the least doubt in patients over 55 or 60 years old, even when they seem only mildly toxic. These cases show why all nodular goiters seen in young adult and middle life should be removed, even if not toxic.

Ten patients died of complications. Two bilateral vocal cord paralyses, 2 hemorrhages (one patient tore his neck open on the fourth day), one pregnant patient aborted on the third day and went into crisis, another pregnant woman with mitral disease simply faded out in 48 hours, 2 cerebral vascular accidents, one streptococcus septicemia. Thus it goes. If one begins to get "cocky" and cannot remember having had more than two or three deaths after thyroidectomy, let him go back and sit down with his records.

So much for the thyroids. Now of the other 63 patients who died in the hospital, 17 were non-operative and 46 were operated on. Many of the former were not surgical cases at any time but were friends or relatives of former patients of ours or simply drifted in as they will to any doctor. Six hopeless cancer patients died with advanced metastases in whom nothing palliative could be done. But half of them were once cases for potentially curative operations. Five cardiovascular patients died. We do not admit practicing internal medicine, but occasionally some such patient comes in and dies on our service, to the detriment of our mortality figures. There were six miscellaneous deaths, including 2 gastric ulcers that bled to death in spite of repeated transfusions. Now we come to the real "grief," the 46 patients who died following operations other than thyroidectomy. Though we operate on many children in the course of a few years, there is only one case under 10, a smashed skull. Of the 46 deaths, 28 occur over 50 years of age; the deaths between 50 and 60 were 14, between 60 and 70 were 10, each twice as many as in any other decades.

Again, we have not figured out the age incidence of all patients coming to us during the period of this study. Moreover, we do not have to do so to make us careful about how much surgical load we are going to put on people past middle life. We have learned a lesson! The following summaries will group the operative deaths by their diagnoses and will detail the essentials of their hospital course and why they died.

Five patients died with acute intestinal obstruction. They were of all ages, with but 2 over 60, but all of 24-48 hours duration. All died of peritonitis, that is, of their disease. We did not kill them by operating on them, they were allowed by their families or by the first man who saw them to commit suicide. Spinal anesthesia, an enterostomy performed in 5-10 minutes, blood transfusions, saline solution, none of these things save many patients who come in in this condition.

Nine cases of malignant disease of gastrointestinal tract died. Of course they are in the cancer age, but these patients who died are far along in years, 6 of them being over 60. After analyzing each case we can say that 4 died of cancer cachexia and mitral failure after surviving operation; they simply never could get out of the hospital; 2 died of complications (cerebral and pulmonary vascular accidents); 3 died as immediate result of operation, of peritonitis and ileus. Remember, then, that a cancer patient must have "something to go on" not only to get through operation but to get up and about and out of the hospital.

We have always thought of the female pelvis as a place where one could work around in with more or less immunity, that our hazard decreased the farther from the diaphragm we went. Here are several good reasons for revising that opinion: chronic pelvic inflammatory disease, gonorrheal or post-abortive, ruptured ovarian cyst producing acute intestinal obstruction, and tubal pregnancy in badly deformed tubes. All died of operation, all died of

peritonitis and ileus, all had the peritoneum drained at operation. What's the answer? Too acute an infection at time of operation. A month earlier or a month later would probably have made a difference. We do not, of course, operate on acute pelvic inflammatory disease, but we misjudged these cases who were thought to be chronic. Some of the histories, however, indicate recent exacerbations. If you feel tempted to operate within a few days of an exacerbation, just tell the patient that by going to bed for a month she can cut her operative risk in two, probably more. See if she will let you operate immediately, knowing that. These remarks do not go, of course, for tubal pregnancy; that is a real emergency in nearly all cases.

We are more and more tempted to drain all such cases through the vagina to prevent accumulations of fluid in the pelvis. You see there are no deaths from vaginal hysterectomies during this period.

Four patients died of acute perforations of hollow viscera; two of gangerous appendices of over 72 hours duration, one in his fourth attack; one of perforated gastric ulcer of 8 hours standing, after 6 years of treatment; one subacute perforation into the pancreas of a duodenal ulcer of a week's standing, medical treatment for 4 years. All died of their disease, not from the operation. May one say, for the millionth time, that "freezing" the abdomen and giving morphine is not the treatment of the first, second or tenth attack of appendicitis. If the diagnosis is acute appendicitis, that constitutes the indication for operation. The death rate from appendicitis for the decade following the war has trebled that of the previous decade.

Ten patients died of gall bladder disease, common duct lesions, chronic pancreatitis, and intermittent appendicitis,—the chronic inflammatory lesions of the gastrointestinal tract. The sooner we surgeons realize that infection in the gall bladder of any duration means also infection in the entire biliary system and pancreas and results in heart and kidney damage, the sooner will we learn to estimate the functional reserve of these organs as fully as possible before operation, to put as little surgical load on these patients as we can, to do simple drainage procedures as a measure of temporary relief until the patient's strength, weight, blood chemical status, myocardial and renal reserve have had a chance to return to the level where radical, extensive operation may be done with relative safety. We have had bitter experience teach us that the behavior of all the parenchymatous organs of a patient who is jaundiced is unpredictable within two to three months. In the 10 cases under discussion death was due directly to operation in two, and to the disease itself and its complications in the other 8.

Four patients died of diseases of the urinary tract. Two operations were done as palliative procedures on dying patients; in a third the inferior vena cava was injured during resection of a kidney for sarcoma; the fourth case died of sepsis after nephrectomy. Not a proud record, perhaps.

Three patients died after herniotomy of various types: jejunostomy for feeding purposes was done on a cachectic lad with traumatic herniation of stomach through the diaphragm (23 days duration); he died of nutritional failure. The second, an obese woman of 53 years, developed apparently a toxic encephalitis (autopsy) and paralytic ileus three days after repair of a huge ventral hernia. We are still wondering whether or not it was worth repairing a large inguinal hernia containing the transverse colon in a 73 year old man. He developed intestinal obstruction and enterostomy failed to save him.

Four patients with miscellaneous conditions died; hopeless, depressed skull fracture in a child; a leg amputation on a 63 year old diabetic who had had gangrene of his foot for 10 months. Ileosigmoidostomy was done for partial obstruction (pathology uncertain) on a 65 year old man. He got up and about, contracted pneumonia on his fifteenth day and died of it. There was one

case of cancer of the breast in whom local operation had been done a week before by her husband. We were urged into doing a radical operation and the patient died miserably of streptococcus septicemia one week later, having undoubtedly had the infection deep in her first wound. When one man disseminates a cancer and then gets you to do a radical operation, you are overstepping all boundaries of horse-sense.

SUMMARY.

In summing up these 46 non thyroid operative deaths, we have tried to be severe with ourselves. We have assigned the deaths as due to the disease itself in 21 cases, to operation in 17 cases, and to unrelated complications in 8 cases. We are going to kill fewer of the next 100 cases that die in the hospital since making this survey of the situation. Such a study means to us what "taking stock" means to a merchant. We know where we stand—and why. From the correlation of facts we have laid down principles by which to be guided in the future.

DISCUSSION.

Dr. John Darrington (Yazoo City): I think we ought to thank Dr. Bartlett for bringing up such a valuable lesson. We welcome this opportunity to have a little personal contact, and I want to congratulate him on presenting a paper that is quite different. I have been a member of the Mississippi State Medical Society for thirty years, and I have heard of more deaths in that paper than in all the papers I have listened to in that time. It is somewhat refreshing, because we can go back home and think that we are not so bad, after all. Other papers telling of nothing but successes, make us feel like fools. Some points in this paper were particularly interesting. He spoke about old age being a factor in the mortality. From this time on I am going to be careful; this old age business is a mistake, and I am going to keep out of it if possible. When we get some concrete series like this, not doctored, not juggled, we are getting something of value. I want also to add a word about the work that boy has done. It seems to me he did all the work and all Dr. Bartlett had to do was a little talking. These young fellows are the hope of the country. They have a much better opportunity than we had. They have the advantage of all the modern teaching. We have so many things to forget; they have new things to remember. Another point I want to comment on is that factor of nutritional failure. I am going to watch out for that also. I think this is one of the most able presentations we have had in a number of years.

Dr. J. P. Wall (Jackson): Dr. Bartlett has brought us something worth remembering—the negative phase of surgery. It is a four-fold lesson. There are four things he has brought to his work. In the practice of surgery we subject people to a grave risk. We learn from our mistakes, but the patient pays for our errors. He has brought us a knowledge of preparation, anatomy, pathology and diagnosis. He knows the makeup of the body, knows its diseases and how they manifest themselves. He has brought us mechanical skill, technical ability, and the greatest of all—judgment. You can acquire the first of these by plugging at books; you can acquire mechanical skill by operating experience; but the other is acquired only by maturity. Had you known before what you know after an operation, you would not have done it. We know how to do it, but we do not know many times when it should be done.

Dr. Whitman Rowland (Memphis, Tenn.): I was particularly impressed with the age incidence in the failure of goitre treatment. We have had the same experience, and our interpretation of that is this: the heart of course being a vital organ, constantly in motion, is an organ which under normal circumstances may stay in constant motion for seventy or seventy-five years, but it is reasonable to believe that during that time it will acquire a certain degree of fatigue. In patients with goitre, we have reason to believe that during that time they have intervals of tachycardia, with shortening of the diastole, auricular fibrillation or flutter. Then we have added to an already existing natural fatigue, the greater fatigue of cardiac manifestations of toxic goitre. The point I want to bring out is that in this type of case digitalis probably helps. In the younger cases we do not see so much effect from digitalis, but in the older individuals it aids in overcoming fatigue. I note that he did not state that death was due to toxic myocarditis, but to circulatory failure or toxic thyroid. Autopsy sometimes shows nothing of an inflammatory nature; no pathological changes in the heart muscle. But thyrotoxicosis produces fatigue, and it is reasonable to believe that these cases would have a normally fatigued heart, and with thyrotoxicosis for a period of years an additional burden has been added to that heart.

Dr. A. Street (Vicksburg): Dr. Bartlett is to be commended for what he has brought out in his modest way. We all know that Dr. Bartlett has been doing good work for many years. While he tells us that he has lost some cases, he does

not tell us how many he cured in order to lose 100 cases. If we can save ten lives or keep ten patients from a state of chronic invalidism which is going to lead to premature death, and restore them to a normal life expectancy, with enjoyment of life instead of dragging out an existence of tragedy and discomfort, I think we are well paid for one patient we may lose. Dr. Bartlett has shown that cases with some existing disease are not good surgical risks. However, if we can offer to relieve them sufficiently to make it worth while, I think the patient is probably willing to take the risk. We have to operate at once sometimes; we cannot wait. I think it would be interesting to know how many operative cases this series is based on, and what the percentage of mortality would be in the series.

Dr. J. Shelton Horsley (Richmond, Va.): I think every man who operates has the feeling that there are cases which if left alone might have got well. At the same time, those are the things we learn most from. It is analyses such as this, postmortems, and the ability to face facts, that enable us to do better work. When we get to the point where we feel we cannot improve, we are ossified. In spite of Dr. Bartlett's good judgment, in his next series, more cases will be shifted from the side on which he had too much inferiority complex, and added to the figures showing those cases which died of the disease itself.

Dr. W. N. Jenkins (Fort Gibson): I want to welcome Dr. Bartlett to Mississippi. I had the pleasure of sitting under him and studying under him and listening to his lectures at Washington University at St. Louis some years ago, and it is indeed a pleasure to hear what he brought us this morning. Some of us in this audience who are not doing surgery are, I feel, getting a great lesson from these statistics. The phase of the subject which impresses me personally is making an early and accurate diaghosis, and helping the surgeon reduce his mortality. The general practitioner, Dr. Bartlett, is responsible for a good many deaths which you told us of, and let those of us who are not doing surgery, who are in small towns, make early and accurate diagnoses so that these patients with acute ulcers and acute appendices will not have gangrenous ulcers and gangrenous appendices.

Dr. Julius Chrisler (Jackson): I want to say a word for these elderly patients with little resistance. We have all had experience with them, but it is a hard thing to tell them if we do anything active they will die. There is, however, a very simple thing that we can tell Grandma to do. I have had a number of such cases in the last few years, and I tell them to use applications of 5 per cent tincture iodin once a week. I tell them to do this six or eight or ten times, and then report back to me, and it is surprising to note how much they have improved and how much more comfortable they are.

Dr. A. G. Payne (Greenville): I cannot let this opportunity pass without expression of my appreciation of Dr. Bartlett's admirable presentation of this subject. Three times it was my pleasure to hear Dr. J. B. Murphy speak on the same subject, each time with the same enthusiasm, and I want to say that I hope it will be my pleasure to hear Dr. Bartlett deliver a talk on this subject three times at least. I feel that most of us have obtained a lot of good out of this paper, and there are some phases of the subject I would like to comment on. A good many times the man who refers a case to you does not give you ample time to study the case, and I think this is a factor in our mortality. There are many cases on which we should have more time. I think we should all carry home a lesson from what Dr. Bartlett said about intestinal obstruction. The man who sees a case of intestinal obstruction a second time has made an error. That to me was the important thing in what he said. The literature recently has been full of this kind of comment, and where surgery is denied the patient after two inspections, that physician has certainly done his patient an injustice. In one of Dr. Bartlett's tables there was a heading for pelvic conditions. I would like to hear him discuss the acute conditions of the pelvis which agitate the minds of so many people. Pitkin of New Orleans said about a year ago that the greatest thing in the world today was the lessening of surgery, and I think if we consider it along the line Dr. Bartlett has brought out it will tend to make us all better doctors or surgeons.

Dr. Willard Bartlett (closing): I am fortunate in having a question raised with reference to the slide I did not comment on. It is one of the most important. There were seven deaths from pelvic conditions. Some of them rested in the hospital for a week or so, and they were all of a good age limit. They should have got well. Every one died, and we have credited their deaths to operation. That means one of two things. These were chronic pus tubes which ruptured. That means that the pelvis, which is a long way from the diaphragm, is a fatal field, a field of potential danger. I did not know before that you could kill them by pelvic operation in the same ratio as in the diaphragm. It means that these women should cool off and go home. I will not operate upon another acute pus tube that comes into the hospital. I send them home. If you do not operate upon them at once, wait six months. Lawson

Tate taught long ago that the collection of fluid in the abdomen, unrelieved, leading to peritonitis, kills people. These patients hung around about ten days and died of peritonitis. In these sixty-nine surgical deaths you did not notice a single vaginal hysterectomy. We do lots of them. What does that mean? In hundreds of vaginal hysterectomies they do not die. Why? We leave the peritoneum open and let it drain into the vagina. In future when I do pelvic operations that are suspected, I am at least going to give that treatment a trial, leave the vagina open, so that no matter what the danger is of ascending infection I know that it cannot be greater than the collection of infection in the peritoneum. I am overwhelmed by the kindness of your reception. My old time friends in the audience have treated me better than I feel I deserve, so we will leave the credit to my son. I am merely the mouthpiece. The younger generation are the saviors of the race—if it can be saved.

A COMPOSITE STATISTICAL STUDY OF THE CHARITY HOSPITAL SURGICAL DEATHS.*

FRANK L. LORIA, M. D.,†

NEW ORLEANS.

Last year your secretary felt it was his duty to gather, analyze, and classify every death which was charged to the surgical section of the hospital staff. He felt that, as the meetings of this section are held to comply with the requests of the American College of Surgeons, and realizing the physical impossibility of reviewing all the deaths at each meeting, the thing which might next answer the purpose would be a review of each record, to pick out those which might bring out the most important points to be discussed, and to classify all of them according to the division of surgery into which the cases might fall. In this way he felt a monthly inventory, or stock-taking, was quite feasible, the composite study of which would be presented to the staff at one of the regular meetings of lesser importance, such as that at which the officers are elected. The composite statistical study of these deaths—which run over a period of seven months, September to March, inclusive, was published in the March, 1930, number of the New Orleans Medical and Surgical Journal. Accordingly, following this precedent I have again undertaken individual case analyses and statistical compilation, according to the final diagnosis on each chart, of all cases dying in the Hospital and charged to the Surgical Staff, from September, 1929, to March, 1930, inclusive.

A grouping of these deaths into divisions is herewith presented. The same outline for classification is followed as for the cases grouped last year. A casual glance at the outline will show a number of obscure diagnoses. I felt it not within my jurisdiction to modify these. It will also be noted that under the division of Surgery are grouped orthopedic and fracture cases as are also surgical diseases of children and other types of cases grouped under general surgery.

The complete outline of this statistical survey follows:

SURGERY.

(Including Orthopedics, Fractures, and Surgical Diseases of Children).

	Cases
Total Number of Admissions	3,867
Total Number of deaths	351
Gross Mortality Rate	9.07 per cent
1. Acidents and homicides (with complications)	
a. Burns (localized but mostly generalized)	28
b. Fractures (not including skull)	31
1. Leg—tibia and fibula	6
2. Clavicle (with emphysema)	3
3. Femur	7
4. Vertebrae	9
5. Humerus	2
6. Pelvis	2
7. Ribs	2

*Statistical review of all deaths coming under the supervision of the Surgical Staff and embracing all cases which died from September, 1929, to March, 1930, inclusive. Read before the Charity Hospital Staff, October 15, 1930.

†Visiting Surgeon and Secretary to the Surgical Staff, Charity Hospital.

	Cases
c. Head injuries (with complications—including fractures)	48
d. Gunshot wounds	40
1. Abdomen	19
2. Head	9
3. Jaw	2
4. Shoulder	1
5. Foot	1
6. Thorax	2
7. Arm	1
8. Leg	1
9. Thigh	1
10. Location not given	3
e. Crush injuries	17
1. Abdomen, pelvis, chest and legs	4
2. Multiple injuries	7
3. Liver	1
4. Leg and arm	1
5. Leg	1
6. Foot	2
7. Ruptured spleen	1
f. Stab wounds	5
1. Head	1
2. Thorax	2
3. Arm	1
4. Location not given	1
2. Abscesses	9
a. Rectum	2
b. Subdiaphragmatic	2
c. Groin	1
d. Pulmonary	2
e. Intramural	1
f. Brain	1
3. Appendicitis	10
4. Carcinoma	29
a. Breast	5
b. Pancreas	2
c. Stomach	8
d. Esophagus	1
e. Rectum	3
f. Antrum (maxillary)	3
g. Intestinal	2
h. Original unknown	5
5. Carbuncle	3
a. Back	2
b. Hip	1
6. Cholecystitis and appendicitis	2
7. Cholecystitis	5
8. Cholecystitis with cholelithiasis	4
9. Intestinal obstruction	19
a. Strangulated postoperative herniae	4
b. Inguinal herniae	3
c. Volvulus-signoid	1
d. Causes not given	11
10. Empyema	11
a. Pneumococcal	2
b. Suppurative pleurisy	7
c. Tuberculous	2
11. Gangrene	20
a. Diabetic	9
b. Senile	7
c. Frost bite	1
d. Cause not given	3
12. Sarcoma	10
a. Abdomen	1
b. Antrum	1
c. Epigastric hernia	1
d. Generalized	2
e. Lungs	2
f. Maxilla	1
g. Glioma of brain	2
13. Spina Bifida	2
a. Meningocele	2
14. Peritonitis	3
a. Tuberculous	3
15. Tetanus	4
16. Syphilis	22
a. Gumma of brain	1
b. Gumma of heart	1
c. Congenital	1
d. Specified only as syphilis	19
17. Osteomyelitis	5
a. Femur	1
b. Metatarsal	1
c. Osteomyelitis (location not given)	3
18. Cavernous sinus thrombosis	1
19. Stricture of rectum	1
20. Acute arthritis	1
21. Hepatitis	1
22. Endothelioma	1
23. Gastric Ulcers	3
24. Duodenal ulcers	3
25. Leg ulcers	2
a. Varicose	1
b. Leg ulcers	1

26. Hemangioma of liver	1
27. Infection of foot	1
28. Stricture of bile duct	2
29. Pancreatitis—acute	1
30. Fistula in Ano	1
31. Cirrhosis of liver	1
32. Dislocation of hip	1
33. Congenital malformation of brain	1
34. Epigastric hernia	1
35. Tuberculosis of rib	1

GYNECOLOGY.

Total Number of Deaths	52
Gross Mortality Rate	2.3 per cent
1. Postabortal septicemia with peritonitis	3
2. Acute bilateral salpingo-oophoritis	6
3. Uterine fibroids	14
4. Carcinoma	10
a. Cervix	7
b. Uterus	1
c. Vagina and vulva	1
d. Ovary	1
5. Chronic salpingitis	7
6. Endometritis	1
7. Cystoma of broad ligament	1
8. Pelvic abscess	7
9. Ovarian cysts	2
10. Ovarian abscesses	1

OBSTETRICS.

Total Number of Admissions	2,027
Total Number of Deaths	84
Gross Mortality Rate	4.1 per cent
1. Premature separation of placenta	1
2. Pregnancy with chronic nephritis	1
3. Prematurity	46
4. Cerebral hemorrhage (new born)	1
5. Abortion	2
6. Parturition	6
7. Parturition-eclampsia	5
8. Vomiting of pregnancy	1
9. Puerperal septicemia	10
10. Premature labor	4
11. Pregnancy	3
12. Miscarriage—induced	1
13. Parturition—placenta praevia	1
14. Pregnancy—extra-uterine	1
15. Parturition—pelvis deformed	1

GENITO-URINARY.

Total Number of Admissions	1,547
Total Number of Deaths	49
Mortality Rate	3.1 per cent
1. Hypertrophy of prostate	18
2. Carcinoma	4
a. Bladder	1
b. Prostate	3
3. Extravasation of urine	2
4. Adenoma of prostate	1
5. Urethral stricture	3
6. Pyonephritis	6
7. Pyelonephritis	1
8. Hypernephroma	2
9. Calculus (Bladder)	1
10. Hydronephrosis	1
11. Nephritis	2
12. Fistula—urethral	2
13. Extensive necrosis of penis	1
14. Balanoposthitis	1
15. Retention of urine	1
16. Cystoma	1
17. Abscess of prostate	1

EYE, EAR, NOSE & THROAT.

Total Number of Admissions	2,212
Total Number of Deaths	25
Gross Mortality Rate	1.1 per cent
1. Bilateral mastoiditis	5
2. Bilateral otitis media with meningitis	1
3. Stricture of esophagus	1
4. Abscess—peritonsillar	1
5. Acute mastoiditis	12
6. Retropharyngeal abscess	1
7. Carcinoma—hypophraynx	1
8. Chronic mastoiditis	3

SKIN.

	Cases
Total Number of Admissions	167
Total Number of Deaths	7
Gross Mortality Rate	4.2 per cent
1. Pemphigus	1
2. Epithelioma	1
3. Cellulitis	2
4. Erysipelas	3
Total Number Admitted (All Divisions)	12,047
Total Number of Deaths (All Divisions)	568
Mortality Rate (Gross for Seven Months)	4.7 per cent

The gross mortality for the seven months under consideration is 4.7. This is 0.97 higher than for the same period of time last year. However, as figures go, the fluctuation is more or less expected. When one takes into consideration the fact that the bulk of the moribund cases, from the country as well as from the city, are brought here during the last hours in desperate attempts to save life; when one stops to realize that this hospital is frequently the dumping ground for outside doctors, a place to send their patients when they get beyond control, a way to cast aside responsibility; when we again stop to consider that about 95 per cent of all emergencies, many of which end fatally, are rushed here for care, then we begin to wonder why the mortality rate is possibly not twice this figure. This rate of 4.7 certainly parallels those of other great hospitals in this country and abroad, and it is to the credit of the members of this staff, most of whom perform their duties conscientiously and honestly, that the mortality rate in this great institution is kept as low as this. It certainly is also to the credit of the officials and administrators, who unhesitatingly lend whatever aid necessary.

Before considering the divisions separately, it is proper to call attention to a fact which results from the continued use of the old nomenclature. Under surgery are included those cases dying in the medical services, the charts of which carry the diagnosis of syphilis—whether this diagnosis be simply syphilis or syphilis involving a system or separate structures of the body. It appears that the word syphilis is sufficient reason for the case to be declared a surgical death. This and similar instances appear to result from the system of nomenclature used at present. The secretary feels it a duty at this time, to call attention to this, because the incorporation of such cases under the death heading have increased the surgical staff's mortality rate, whereas, the deaths might probably be more satisfactorily charged to the medical services.

Perhaps the most interesting group, and probably the one giving the most variable material for speculation, is the division of surgery. This division presents the largest mortality rate—9.07. There occurred 351 deaths in this group. Of these 178, or slightly more than half were accident cases, most of whom were emergencies and moribund on admission. Among them head injury cases headed the list with gunshot wounds a close second, followed by fractures—other than those involving the skull—and this by the burn cases. These four groups alone account for 147 deaths, there being only thirty deaths caused by other types of injuries. The automobile was responsible for about 95 per cent of the head injuries, whilst amongst 40 cases of gunshot wounds, most all of which were the result of criminal acts, there were 19 involving the abdomen. Among the 173 cases, the deaths of which were caused by various diseases recognized as surgical conditions, carcinoma headed the list with 29 cases. This group was closely followed by the syphilis cases above referred to—*i. e.*, 22 cases. Gangrene of various types accounted for an additional 20 cases. Therefore, nearly half of the deaths charged to conditions resulting from pathology looked upon as surgical can be charged to three groups of cases—*i. e.*, cancer, syphilis, and

gangrene. While I have not had the opportunity to investigate past records, I venture the opinion that this is pretty much the true state of affairs in the past. I should probably add that appendicitis, a dreaded disease in the past, appears to be pretty well under control. During the entire period of seven months there were only 10 deaths from this disease, rather remarkable when we take into consideration the many cases of acute suppurative and even ruptured appendicitis that come pouring in from the city and particularly from the country. There were 866 cases of this disease, giving a mortality rate of 1.1.

As expected, aside from the eye, ear, nose and throat division, the gynecology division shows the smallest mortality rate. The date of 2.3 represents 52 deaths among 2227 admissions. Among these 52, carcinoma and uterine fibroids head the list with a total of 24 deaths. There were also six deaths in cases diagnosed as acute blateral salpingitis and seven cases of pelvic abscesses.

Among 2027 admissions to the division of obstetrics there resulted 84 deaths giving a mortality rate of 4.1. However, 46 of these deaths were diagnosed as prematurity and one cerebral hemorrhage of the newborn. Therefore, it appears that the remaining 37 were mothers, the greatest number (10) dying from puerperal septicemia and five as the result of eclampsia. Whether 37 mothers lost over a period of seven months represent the average in the obstetrical services, I am unprepared to say. However, it is probably true that many cases are admitted who are already infected.

There were 1547 admissions to the genitourinary services, with 49 deaths. Among these 18 deaths were diagnosed as hypertrophy of the prostrate and 7 as pyonephritis and pyelonephritis combined. Cancer here was responsible for 4 deaths. During this time 83 cases of prostatic hypertrophy were admitted to the Hospital. If all were operated upon the death rate was 21.7. Is this the average for these cases?

The most gratifying mortality rate of all the divisions was charged to the eye, ear, nose, and throat departments. During the seven months 2212 cases were admitted and everyone was probably operated upon. Among them there resulted only 25 deaths. Twenty of these cases were mastoids, 12 of which were definitely acute and 5 probably so. Meningitis, stricture of the esophagus, retropharyngeal abscess, carcinoma of the hypopharynx, and a peritonsillar abscess were the diagnoses given in the other cases. It is remarkable that during this entire time not one died following tosilectomy. If there was any your secretary failed to locate it. It might be only fair to add, that the mortality rate for tonsillectomy and adenoidectomy operations at Charity Hospital during these seven months was zero per cent.

Finally, we have for consideration the division of skin diseases. To these services were admitted 167 cases with 7 deaths, or a mortality rate of 4.2 per cent. Heading these deaths were erysipelas and cellulitis representing five cases while pemphigus and epithelioma were responsible for one each.

The above, gentlemen, is a composite statistical review of the deaths charged to the Surgical Staff during the meetings of 1929 and 1930. This represents only seven months and is herewith presented for your benefit. In closing, I wish to express my heartiest gratitude and appreciation to Miss Margaret King and Miss McFeterich, surgical staff stenographer and record room clerk respectively, for their invaluable assistance in compiling these statistics and without whose help this survery would have been impossible.

EXPERIENCE WITH RECENT METHODS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

CHAILLE JAMISON, M. D.,

NEW ORLEANS.

The modern era in the experimental and clinical treatment of pulmonary tuberculosis may be said to date from 1890, when Robert Koch announced his discovery of tuberculin and his belief that it was specific for early cases of this disease.

I do not mean to imply that intelligent and successful therapy was not used by many clinicians before this time, but that a definitely established routine of treatment was not generally accepted and that experimental methods were only beginning. It is interesting that George Bodington, an English physician, in his *Essay on the Treatment of Pulmonary Consumption*, published in 1840, anticipated many of the modern views as to the advantage of cold, dry air for "healing and closing cavities and ulcers of the lungs," and he also recommended exercise in the open and abundant nutrition. The theory of this author was so roughly handled by the medical critics of his day that he was discouraged from carrying it to any extent into practice. The first sanitorium for the treatment of tuberculous patients was established by Hermann Brehmer in 1859, and Peter Detweiler (1876) is credited with first introducing the rest treatment in the open air. About 1863 Debove origated forced feeding in phthisis. It is certain then that the modern conception of treatment i. e., rest, open air, diet and climate, all of these best obtained in special sanitariums, was well known and widely recognized by the medical profession before the end of the last century. It is safe to say that for many years this routine has been generally followed, and it may be concluded that in certain specially selected cases arrest of the disease nearly always occurs, but any certainty of this result depends on early diagnosis, and a great expenditure of time and money is necessary to institute treatment properly and to continue it for a sufficient length of time. This established therapy does not make a direct attack upon the infection, but merely seeks to fortify the host. It is obvious that the attempt to build up a resistance, the existence of which is always hypothetical, is extremely uncertain and unsatisfactory; the only certain thing about it is that it fails in the vast majority of cases where the infection has progressed to any great extent. Recognizing the inadequacy of the present-day treatment, constant efforts are being made, and have been made for many years, to improve our methods, and also to find a specific agent. These efforts have followed four paths; (1) specific biologicals; (2) specific chemicals; (3) surgical procedures; (4) physical agents.

SPECIFIC BIOLOGICALS.

For many years following Koch's announcement of tuberculin, interest centered in this and kindred products, and various derivatives of the tubercle bacillus, such as filtrates, autolized organisms, organisms grown on different media, and variously treated, and even the tubercle bacilli isolated from turtles, were proclaimed with greater or less conviction by their apostles as specifics. In spite of the attractive and logical theories which led to the general use and abuse of tuberculin and kindred products, the opinion of clinicians and investigators seems to be that such substances are of little or no value in the treatment of pulmonary tuberculosis, and may even be dangerous. I have been so impressed with this view, as generally expressed in the literature, that I have used these products very little, but what small experiences I have had have convinced me that this point of view is correct. So far as I know, sera have never been seriously advocated, but it is interesting to speculate upon the value of blood taken from animals known to be immune

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to this disease. Such a series of experiments were begun last summer, but the direct dangers of the use in man of blood from such animals seems so far to be an almost unsurmountable obstacle.

CHEMICALS.

It has been known for many years that gold was more or less specific for the tubercle bacilli in vitro, and following the brilliant work of Ehrlich with arsenicals in syphilis, it was natural that experiments should turn to the use of gold in tuberculosis. Only a short time ago sano-crysin was announced as a specific chemo-therapeutic agent, but well conducted experiments on tuberculous animals and men has demonstrated no particular value. Other of the heavy metals have been extensively used by the French particularly in the last few years; I became interested particularly in cadmium and administered this metal by mouth, sub-cutaneously and intra-bronchially to ten advanced cases. I got the impression from this experience that the drug was harmful and at the best brought no relief to this particular group of cases. It is possible that some of the heavy metals, particularly manganese, may prove a specific agent, and they probably deserve thorough investigation. Calcium has been used for years, but its intravenous administration is more modern, and since calcium deposition plays a part in the healing of a tubercle, it is reasonable to think that this chemical might be of value, particularly if there was a lack of calcium available in the blood and tissues of the patient. Drs. Robbins and Campagna investigated this matter for me on a group of cases with advanced pulmonary tuberculosis and found low normals for calcium in the blood of nearly all of them, but intravenous injections of calcium and injections of paratharmone seemed to elevate the blood calcium but little, and to have no apparent beneficial effect. No systematic investigation was made of the use of calcium in hemorrhagic cases and the impression is quite prevalent that in this kind of case there is justification for its use. Because of its supposed specific effect upon the leprosy bacillus, so similar to the tubercle bacillus in its staining characteristics and morphology, Chaulmoogra oil seems worthy of some consideration from an experimental point of view. I have been using this drug in the treatment of pulmonary tuberculosis, off and on, for nearly twenty years, and have given in by mouth, sub-cutaneously and by injection into the bronchi. I am not obsolutely certain that it has no value, but my clinical experience is too lacking in definite results to carry conviction. The chemicals and drugs that I have investigated have had, in my opinion, no beneficial effects. On theoretical grounds it does not seem to me that chemo-therapeutic agents given by vein, by mouth or sub-cutaneously, hold out much hope of success, and very convincing animal experiments would be necessary to make me alter this view.

SURGICAL PROCEDURES.

These methods consist of artificial pneumo-thorax, phrenecoexerrisis, thoracoplasty and intercostal neurectomy. It is the opinion, almost unanimous, of those clinicians who have used artificial pneumothorax, that it is the greatest step forward in the treatment of pulmonary tuberculosis that has been taken in years.

After a rather extensive use of this method, I can heartily concur in this opinion. The indications for artificial pneumo-thorax are limited and must be clearly understood or disasters may result. Phrenecoexerrisis is of great value, either with or without pneumo-thorax, and it is of particulr value where pneumo-thorax cannot be induced or where the base of the lung is mainly involved. Thoracoplasty is of very great value, but the indications for this step are so narrow that its use can never be very general. Intercostal neurectomy does not seem to be of much value either on theoretical or practical grounds; however, as I have had no personal experience with this method, I do not wish to be dogmatic. Experiments

on lung puncture and the direct injection of various substances into tuberculous areas, are now being conducted in my service, and though a great many such punctures have been performed and a variety of drugs injected without difficulty and without mishap, I am not ready at this time to make any reports of this procedure.

PHYSICAL AGENTS.

Heliotherapy is very old in pulmonary tuberculosis, but has been revived to a large extent in recent years, and solaria are now very common in many European sanitoria. There seems to be considerable confusion concerning the use of light and it should be well known that in spite of its beneficial effects on tuberculous lesions in other parts of the body, considerable harm is done to pulmonary tuberculosis when light is directed over the thorax. Direct sunlight is definitely harmful to the pulmonary forms of tuberculosis and no kind of heliotheraphy should ever be used in the exudative forms of the disease, but in the early proliferative forms it may be of value if used with the utmost care and according to a standardized technic. The advice "plenty of sunlight" should be given to the consumptive only with the greatest caution, and he should be made to understand that direct exposure is deleterious and may even be disastrous. The roentgen-ray and radiations in general have not been greatly used, but I am convinced that there are possibilities in this field.

In conclusion I feel that the small experiences which I have presented to you will lead you to be even more cautious in accepting or promulgating any ill-advised claims of specific cures for tuberculosis by whatever method, unless such methods have been subjected to the most searching clinical and animal investigations, and I should like to emphasize again that rest, diet, fresh air and climate remain our only tried and true methods in our fight against the great white plague.

DISCUSSION.

Dr. Peachy Gilmer (Shreveport): I have certainly enjoyed Dr. Jamison's paper, and I think it is very timely, for it marks a definite step forward in the programs of the Louisiana State Medical Society. Heretofore, we have spent a great deal of time, probably most of our time, with a long paper on the diagnosis of tuberculosis. I think that time was well spent, I am not complaining about that at all, but I believe now a paper on treatment is most timely and marks a definite step forward. We are beginning to think about treating tuberculosis now. We are talking it to the general men. Of course, somebody will say the treatment belongs to a limited group. It does in a way, yet it concerns all of us who practice medicine. All of us don't have the facilities for treatment used in the sanatoria and necessarily we must do something for them ourselves.

The doctor has covered very nicely, in fact completely I think, all of the thoughts that I could give you on recent advances in treatment. I know that he didn't have time to go into the details of all of it, and I won't have time to go into the details of all of it. But it is bringing to your attention something that we think is going to be good.

My own individual idea about the biological part is that some day we are going to work out something definite from that standpoint, I think particularly along the lines of vaccination. We must all have acquired a certain amount of immunity in our lives or else all of us here in the room would have tuberculosis. That immunity has been brought about by our body cells coming in contact with the tubercle bacillus and with the corresponding antitoxins, antibodies, or protective substances, or whatever they may be, being formed and holding that disease in check. Therefore, I am hopeful that later on we are going to have a vaccine that is going to be somewhat specific. We have done a little experimental work at the Pines along that particular line and we are not going to say much about it, but in some instances we have obtained splendid results; in fact, specific results with the disappearance of all symptoms and return to normal condition.

I think the surgical part of the treatment of tuberculosis should be emphasized again and again. I take the same stand on surgical intervention in tuberculosis that the surgeon takes when he is able to diagnose acute appendicitis. I never yet heard of a surgeon who wanted to wait until the appendix had ruptured before taking adequate operative procedures, and I think that the people who are treating tuberculosis now have changed their ideas. They are not going to

allow a patient to remain in bed month after month with a condition which justifies surgical intervention.

Take your choice as to what your surgical intervention should be. I think starting out with the mildest or the most successful form of treatment should be first. I refer to pneumothorax Don't wait until that patient has fought this battle and has been subjected to the toxemias of tuberculosis months and months and months. If you have an acute lesion or a lesion that you don't think is going to heal, isn't going to make satisfactory progress, go ahead and do your pneumothorax. Rest is the thing, rest of that lung, no matter how you get it. If you can get enough by lying quietly in bed, that may be sufficient. If that isn't sufficient, don't wait for months before you intervene and do something else.

If adhesions will not permit pneumothorax, I would go on to phrenicotomy. With phrenicotomy we do not get as much compression of the lung as we do with pneumothorax, but we get an immobilization, a marked decrease in respiratory rhythm. The diaphragm on the side affected rises high enough to put that lung at almost complete rest. The respiratory murmur is markedly diminished, and phrenicotomy, with evulsion of the phrenic nerve, is fast coming into popularity.

In the event that the two milder forms of surgical intervention are not sufficient to bring about the results desirable, then if it is possible I see no reason to hesitate to go on to the more drastic treatment of thoracoplasty.

Dr. W. S. Kerlin (Shreveport): Dr. Jamison has covered the subject so thoroughly and Dr. Gilmer has discussed it so well I, therefore, have a hesitancy in offering any remarks regarding the different methods of treatment as mentioned by Dr. Jamison.

It is very refreshing to know that a clinician of Dr. Jamison's ability is carrying on this work. I didn't know we had a clinician in Louisiana other than the specialists that was doing this character of work. I hope that in the future he will have more to tell us.

Dr. Charles R. Gowen (Shreveport): I will only take a couple of minutes of your time. Dr. Jamison said what I wanted him to say. Every few days someone comes to my office asking about the new treatment, and wanting to know whether to have a pneumothorax, phrenicotomy or thoracoplasty. They like the demonstrable thing, something that can be done that they see being done.

As the doctor said before, rest, fresh air, and all that, has been tried out. One mistake that we all make is that we do not try fresh air and rest properly, and what I mean by rest is absolute bed rest. Usually the patient is told to take care of himself, stay in bed, this thing, and the other. I tell my patients to stay in bed at least twenty-four hours and a half a day during the period of activity, and the rest of the time they can do as they like. If that is carried out, our other treatment will be less and less.

The field of surgery in tuberculosis is limited. The surgeon should have no opinion whatever of when or how this patient should be operated. It should be directed by the clinician with a great deal of trepidation and trying the other methods first.

Pneumothorax is not as simple a procedure as one would think. Only Sunday I gave a pneumothorax a refill. I had a patient for some fifty refills. She had a pleural shock of gas embolus, or what not. I thought she was going to die in my office for about five minutes. It throws a scare into you. The phrenicotomy is possibly the least harmful of any and the least dangerous. Thoracoplasty is very definite and a great relief to a patient. We have had several that have shown splendid and very substantial improvement, but all of these surgical procedures, biologicals, should not be tried until a patient is put in the proper condition. Flatten him out, lower his respiration and try to get him symptom free otherwise. To have a patient that has taken treatment in the ordinary way of staying in bed a few hours, a little sunlight, this, that and the other, and hasn't improved, and then try some surgical procedure is rather unfair to the patient. Try the other in the most strict way before the surgical procedures or biologicals are resorted to.

We find hundreds of cases of tuberculosis on the postmortem table and by the roentgen-ray that have healed spontaneously. Nature got them well somehow. With a little help along definite lines over a number of months giving the patient rest, both mental and physical, we can do a great deal more than we can by a haphazard method.

I certainly enjoyed Dr. Jamison's paper and, again, it was just what we needed along that line.

Dr. R. McG. Carruth (New Roads): I want to ask Dr. Jamison, in reference to a low-salt or salt-free diet in this disease, whether he has had any experience with EKA salt, a malate of sodium as a substitute for the chloride? It was recently gotten out by a Johns Hopkins' chemist, is manufactured by Sharp & Dohme, and said to be free from the harmful effects to the system produced by common table salt.

Also he spoke of manganese. What does he know about mangatrate, a butyrate of manganese, sold by the New York branch of the Anglo-French Drug Company, and said to be a powerful bacillicide to pathologic organisms and to increase resistance to their invasions.

As to sunlight, we all know that we have accentuated the value of fresh air, rest and sunshine for many years. Now recently, we have heard a great deal about heliotherapy in the form of lamps, ultra violet and infra red. What is the danger in adminstering this treatment, and would he recommend these lamps or either of them?

Dr. Chaillé Jamison (New Orleans): I want to thank the gentlemen for their discussion.

What I wanted to bring out was that we all know the value of rest, fresh air, diet and climate. I brought this paper out especially to warn the general man that those are the things to lean upon, and that particularly rest must be accentuated.

Let me say one other word of warning. The tuberculosis patient is the most hopeful patient on earth. Anything that you do to him, he thinks he is getting better, even to the point that he is well. It is our duty to convince these people that they are not well and not lead them to believe that they are well. In treating tuberculosis, no matter what the procedure, nothing is accomplished except arrest of the disease, and it is a fight for a lifetime. Those things, up to the point of our present knowledge, should be very strongly emphasized.

So far as specifics are concerned in the treatment of tuberculosis, I cannot be convinced by any clinical results. If we get specifics, they must be capable of demonstration in the infected animal, which is easy. You can give a guinea pig tuberculosis, give a rabbit tuberculosis, and you can give a cow tuberculosis. If you have a specific, it will cure those animals. Any specifics must be susceptible to animal proving.

So far as the salt free treatment and the question asked by Dr. Carruth, this particular salt substitute you mentioned is nothing but a salt substitute. When you withdraw sodium chloride from the patient you give him the chemical to make his food tasty. It has no clinical value. It is merely a substitute, and an interesting one we have used for years in the treatment of hypertension and such conditions when we wanted to take our patient off salt.

You asked about manganese butyrate. It has been advocated and is said to cure furuncles. All of you have seen furuncles cured in the last two years by at least 42,000 specifics.

I am a little skeptical, I must confess. The artificial lights are just the same as sunlight, and they are particularly deleterious to patients with an acute exudative lesion when the chest is exposed—that is all, when the chest is exposed. Patients should not be exposed to direct sunlight. That doesn't mean they shouldn't be in a sunny climate, but they should be protected from the sun. You know the French for years have had their people go around with purple umbrellas to keep the sun off the chest. Some of the clinics in Germany, where artificial light is used to the greatest extent, protect the chest most carefully when applied to any other portion of the body. I understand the penalties there are quite severe if anybody exposes the chest to sunlight. That doesn't mean in the hands of experts, like Funk for instance, who follows a very careful technic of tanning, that the exposure of the chest to these rays may not have value for some.

But for our ordinary purposes today, we have no specifics, we haven't any in sight. Study is going on all the time. Various methods claimed to cure tuberculosis, unless subjected to the most careful scrutiny, should be regarded with absolute skepticism, and the patient should not be subjected to them. Tuberculosis patients should be subjected to rest, diet, fresh air, climate, and still more rest.

FOUR CASES OF HODGKIN'S DISEASE TREATED WITH RADIUM.*

H. E. GUERRIERO, M. D.,

MONROE, LA.

The term Hodgkin's disease, first employed by Samuel Wilks, in 1856, in honor of Thos. Hodgkin, who described it in 1832, is still the current name of the disease in English speaking lands. In other countries, the name lymphogranulomatosis is more frequently employed. This word was applied to the disease in 1899 by Sternberg, the first to describe clearly its histologic features and to separate it thereby from similar processes. He, however, felt that it was an unusual type of tuberculosis, and as a consequence its complete establishment as a distinct entity is due to Dorothy Reed, who followed three years after Sternberg. Since her work cleared the field, more than 20 years have passed, and unless the etiologic studies of the future change our conceptions, it is always likely to remain a distinct disease.

In 1865, Cornil and Ranvier, from a study of the literature and their own cases, had noted that Hodgkin's disease was more than a mere "affection of the lymph glands and spleen." In addition to involvement of the lymph nodes and spleen, they found the specific lesions in the following organs and tissues: the skin, intermuscular tissues, subcutaneous tissues, bones, thymus, lungs, stomach, and intestines.

Simultaneously with the publication of these articles in England and France, similar studies appeared in Germany, chief among which were those of Bilbroth, and Conheim. It was the great merit of Conheim to perceive the generalized nature of Hodgkin's disease and its close similarity to leukemia in its widespread systemic dissemination.

With medical attention now fully interested in this malignant malady of obscure etiology, numerous case reports began to appear in the literature in which ever wider areas of invasion were recorded until the protean and systemic aspect of Hodgkin's disease were fully established and thus, in 1879, Gowers in his comprehensive contribution on Hodgkin's disease, gave details concerning the lesions not only in the lymph nodes and spleen, but also in the skin, intermuscular tissues, bones, brain, soft palate, pharynx, tonsils, esophagus, stomach, intestines, liver, pancreas, peritoneum, thyroid, thymus, trachea, lungs, pleura, diaphragm, pericardium, heart muscle, suprarenals, kidneys, testes and ovaries.

The protean aspects of Hodgkin's disease thus stressed by Gowers received further corroboration and was repeatedly and conclusively proved that not a single organ or tissue had escaped invasion in this disease. Although it is unquestionably true that in large series of cases the superficial lymph nodes are the first to attract clinical attention, numerous case reports have appeared in the literature in which the primary and predominant clinical localization occurred in the skin, bones, nervous system, nose, tonsils, stomach, intestines and hemopoietic system.

OCCURRENCE.

No period of life from the cradle to the grave is entirely exempt from this disease. It is generally stated to be common in the second, third and fourth decades.

For some unexplained reason, all statistical studies have shown that males are much more subceptible than females.

Four views as to the nature of Hodgkin's lymphogranuloma may be mentioned —namely that it is (1) an atypical form of tuberculosis, (2) a specific infective granuloma of unknown nature, (3) a new growth, and (4) a transition between a granuloma and a new growth.

(1) The relationship of lymph-adenoma and tuberculosis has long been discussed. To the naked eye the large celled tuberculosis hyperplasia of the lymphatic glands

*Read before the Louisiana State Medical Society, Shreveport, April 29-May 1, 1930.

is often indistinguishable from lymphadenoma.

(2) A specific infection—various organisms have been described as responsible for Hodgkin's lymphogranuloma, but none of them can be regarded as proved. The most attractive is a potozoal (Lowit) or spirochaetal (White and Proescher) origin on account of the eosinophilia in the glands, and the well marked reaction in the early stages at least, to arsenic. Bunting and Gates found a gram-positive pleomorphic diphtheroid bacillus which Bunting states can be found in every case and by experimental inoculation made to produce the early histological changes seen in man; but the last two statements have not been confirmed.

(3) The view that Hodgkin's lymphogranuloma is a new growth, allied to sarcoma or endothelioma, is probably derived from the impression that this follows from its extension beyond the limits of lymphoid tissues and its infiltration of tissues, such as muscle and bone which do not contain any lymph-adenoid tissue, but in this extension there is nothing incompatible with the behavior of the infective granulomas, tuberculosis, syphilis, and actinomycosis.

(4) The compromise that Hodgkin's disease is a transition between an inflammatory formation and a neoplasm and shares characters with both of these processes has been supported by Symmers, who classes it with mycosis fungoides, Conheim's pseudo-leukemia, Sternberg's leukosarcoma, and Gaucher's disease.

That Hodgkin's lymphogranuloma is malignant in the sense that it leads to death is undoubted, and it differs from tuberculosis, which in many respects it closely resembles, in being constantly fatal and not becoming obsolete. Even if it be held that true Hodgkin's disease is confined to lymphadenoid tissue, the occurrence of lymphogranulomatous masses in the liver and kidneys might be explained on the hypothesis that there is a compensatory hyperplasia of the lymphoid tissue around the vessels and that subsequently this becomes infected with the veins of the granuloma. But, further evidence suggesting malignant characters, such as invasion of the adjacent bone and the histological characters of sarcoma, described years ago by Karsner are now established, and Ewing considered this transformation into sarcoma as a tumor sui-generis and as by no means rare. Prof. H. M. Turnbull, while fully recognizing the existence of the condition which Ewing terms Hodgkin's sarcoma, regards it as the lymphosarcomatoid form of Hodgkin's lymphogranuloma and as inflammatory rather than neoplastic.

THE BLOOD.

Roelleston states that the white count does not show any constant or characteristic changes. Usually leukocytosis is absent and there may be a leukopenia with a relative lymphocyte increase, especially, when the spleen is predominantly affected, a view shared also by Weber. Bunting describes the blood picture in two stages: in cases under a year's duration, no leukocytosis, a relative lymphocytosis, diminished eosinophils, and increase in the transitional cells. In more advanced cases when the disease is spreading widely there is a leukocytosis with a raised polymorphonuclear count (75 to 90), and later, from exhaustion of the bone marrow, an absence of blood platelets.

The primary site of Hodgkin's lymphogranuloma is a subject of some practical importance, for enlargement of the superficial lymphatic glands being usually the first indication of lymphadenoma has accordingly been generally regarded as the starting point of the disease. But, it does not follow that the glands first probably enlarged are necessarily those first attacked. Symmers, from pathological experience, contends that this conception is erroneous, and that primary enlargement of the abdominal or the abdominal and thoracic glands combined is ten times commoner than primary enlargement of the cervical glands. With this Ewing agrees,

and adds that the enlarged superficial glands which first attract attention are merely the outlying portions of an internal lesion. The idea that the glandular enlargement on the neck may in any given case be secondary rather than primary, and, indeed, be analogous to the glandular metastases in malignant disease inside the chest and abdomen, should become more constantly in our minds, and, being based on post-mortem observations, demands clinical confirmation by systematic roentgen-ray examination of the chest in every early case; for if intra-thoracic or abdominal involvement is present this should obviously be treated by deep radiation. The unsuspected existence of intra-thoracic lymphogranuloma may help to explain some apparently hyperacute cases, such as Brummer's patient, a woman aged 27 years, who died with two weeks symptoms suggesting acute cardiac failure, the necropsy revealing extensive Hodgkin's disease.

Enlargement of the superficial lymphatic glands may disappear under treatment, either entirely or partially, while insidious implications of the deep abdominal and thoracic gland progresses, and the patient becomes anemic, emaciated, and eventually dies. Intercurrent infections, such as erysipelas, appendicitis, and labor or influenzal pneumonia, may be followed by diminution in size or disappearance altogether of the glands which, however, subsequently reappear. The same temporary improvement, especially in the blood count, may occur in leukemia, an event which is of interest in connection with Symmer's contention that Hodgkin's lymphogranuloma and myeloid leukemia are probably different quantitative responses to the same type of provacative agent. Further, this reaction is of interest in connection with W. B. Coley's treatment of Hodgkin's lymphogranuloma by the mixed toxins of erysipelas and bacillus prodigions and radium.

DIAGNOSIS.

The distinction from other forms of glandular enlargement, tuberculosis, leukemic, chronic inflammatory, and sarcomatous, and from other pyrexial states would, if systematically considered, occupy much space, and a few points only will be touched on.

From the difficulties of clinical diagnosis a dogmatic opinion is uncertain and often unwise until a gland has been removed and found to show the characteristic histological changes. Unfortunately a gland excised from a case of Hodgkin's lymphogranuloma does not always show the lesions; its enlargement may be due to simple non-specific inflammation or to compensatory hyperplasia. According to Prof. Turnbull the histological changes are best seen in glands which are very hard and from contraction not necessarily enlarged, and not very infrequently the microscopical report cannot go further than lymphogranuloma, possibly Hodgkin's, but histological characters are not definite. The greatest difficulty is the clinical differentiation of Hodgkin's lymphogranuloma from lymphosarcoma and the closely allied malignant lymphocytoma, composed of small lymphocytes, and from endothelial sarcoma.

Undetermined forms of glandular enlargement, such as those spoken of as infectious mononucleosis and glandular fever, may though of comparatively short duration, give rise to difficulty in diagnosis. Cases of aleukemic leukemia — namely leukemia in an aleukemic phase, can hardly be differentiated from Hodgkin's disease except by histological examination of an affected gland.

PROGRESS AND TREATMENT.

The duration of symptoms varies; acute cases lasting a few weeks are rare, and the suspicion may arise that from the presence of internal glandular disease they are not so acute as the duration of obvious signs, due to generalization would suggest. When the primary site is in the thorax or abdo-

men and extension later occurs to superficial glands, the course may, when calculated from their detection, be very short; the primary enlargement, especially in the chest, may, owing to the adaptability of the viscera, remain latent for a long time and be detected by skiagraphy only.

Prognosis as to duration of life depends on treatment by arsenical preparations and irradiations, for there is not any evidence that, as in tuberculosis, a spontaneous cure occurs. The effect of arsenical preparations is at first most successful; but relapses occur, and eventually the drugs fails to control the disease. The same appears to be true with regard to the radiations of roentgen-rays and radium, but in most exceptional instances this does not hold good. Success has attended the treatment, by Dr. W. B. Coley, of Hodgkin's disease by repeated injections of the mixed toxins of erysipelas and bacillus prodigiosus and of massive doses of radium.

Surgical opinion has long been adverse to removal of lymphadenomatous glands on account of the difficulty of complete extirpation and of the frequency of similar intrathoracic disease.

Of 36 cases of Hodgkin's disease at the Montefiore Hospital during the years from 1914 to 1925, ten of the 36 cases showed definite invasion of the nervous system. These case reports are so interesting that I think it wise to read a history of one of the cases word for word as presented by Dr. Solomon Ginsburg.

History—U. S., a man aged 47 years, was admitted to the neurological service of Montefiore Hospital, August 16, 1923, with a diagnosis of possible cord tumor. In May, 1921, the patient suddenly developed intense itching over the dorsal surface of his left forearm. There was not any visiable eruption over the site of irritation. A few weeks later, a similar condition developed over the left upper outer thigh and scrotum. The itching was most intense at night, interfering with sleep. For two years the pruriginous condition continued unabated and was relieved only occasionally by local medication. In the meanwhile other symptoms appeared. In May, 1922, one year after the onset of the pruritis, the patient developed asthma, fatigability and dyspnea on slight exertion. These symptoms grew slowly, but progressively worse until May, 1923, when he was suddenly seized with severe cramplike non-radiating pain in the upper part of the abdomen. He immediately consulted a physician, who diagnosed his condition as gastric ulcer. A roentgenologic study of the entire gastro-intestinal tract failed, however, to reveal any lesion. The abdominal pain kept recurring, and two or three weeks after onset, it began to radiate posteriorly to dorsal spine. The colicky character gradually changed to a sharp, cutting and stabbing pain which radiated from the lower dorsal spine periphrally to the abdomen and down both lower extremities to the toes.

In June, 1923, the patient was admitted to a prominent hospital in New York where after several weeks of observation and a most exhaustive study, including roentgen-ray examination and serologic tests, a diagnosis of spondylitis was made. The patient's condition gradually grew worse. In July, 1923, he began to develop symptoms of paraplegia and became bedridden. On August 8, 1923, he was admitted to the neurologic service of Montefiore Hospital.

Examination: The patient was markedly pale, but well nourished in the trunk and upper extremities. His chest, lungs, and heart were normal. On abdominal palpation, he revealed an enlargement of the spleen to 1 inch below the costal margin and a moderate enlargement of the liver.

Neurologically, he revealed an almost complete motor-paralysis and loss of sensation in both lower extremities with sphinteric involvement. There was atrophy of the muscles of the thighs and legs. Hyperesthesia and hypalgesia were present from below up to the sixth and seventh dorsal segements.

Roentgen-ray study of the skull, spine, chest and gastro-intestinal tract failed to elicit any gross lesions. The blood and spinal Wassermann tests were negative. The spinal fluid showed a slight increase in pressure, but did not present other abnormalities. A study of the blood chemistry and a colloidal gold test failed to reveal any abnormality. A count showed, erythrocytes, 3,600,000; hemoglobin, 75 per cent; white blood cells, 11,600, polymorphonuclears, 55 per cent; small lymphocytes, 15 per cent; large lymphocytes, 28 per cent; eosinophils, ½ per cent; myelocytes, 1.5 per cent.

Treatment and Course: After 4 weeks of observation, study and consultation with heads of several departments, the consensus of opinion, with one exception, was in favor of a spinal cord neoplasm and operative intervention.

On September 19, 1923, a laminectomy revealed an extradural tumor, 8 cm. in length, lying between

the third and seventh dorsal vertebrae. Its upper and lower poles were defined sharply. Its surface was smooth and glistening. The laminae overlying the tumor were intact with the exception of those of the sixth dorsal, which were eroded. The lateral limits of the tumor were ill defined, the neoplasm apparently extending circumferentially all around the cord. The thickened portion of the tumor measured about 2 cm. The dura and cord were compressed, but not invaded by the neoplasm. However, only an incomplete removal of the tumor was possible which on pathologic examination was reported as a sarco-endothelioma.

The patient made an uneventful recovery, and a few days after the operation was able to move his lower extremities actively in bed. The sphinteric involvement, however, continued and radiotherapy was decided on.

On January 20, 1924, the patient received his first radium application in the form of a pack over the dorsal spine at the site of the operation. This was repeated about once a week, in fractional doses until August 23, 1924. There was moderate improvement in the paraplegia symptoms until July, 1924, when he began to have remittent fever up on 102 degrees F. He also developed generalized enlargement of the lymph nodes and spleen.

A biopsy of the enlarged inguinal lymph node showed pathologic changes similar to those of the extra-dural neoplasm. Both specimens were submitted to Dr. James Ewing, whose diagnosis was Hodgkin's disease.

Out of a study of four cases of Hodgkin's disease that were admitted to the clinic in the past six months will report the findings on one case. All the cases were identical in that only the cervical glands were involved and it would be a mere repetition of this case to report the remaining three cases.

Case No. 1. Mr. J. W. H., a white male, age 50 years, was admitted to the Vaughan-Wright-Bendel Clinic on October 1, 1929.

Family History: Married; no children. Father dead, at age of 49 years, tuberculosis. Mother dead, age 76 years, senility. Brothers 2; one living and well, other dead, pneumonia. One sister living and well. Three dead, one died of tuberculosis, cause of death of other two unknown. Gastro-intestinal tract, circulatory system, genito-urinary system negative.

Present Illness: Began two years ago with pain in right side of neck accompanied by the appearance of a small lump in same region about the size of a walnut, which appeared and disappeared over a period of time of 1 year. The mass reappeared about 1 year ago and has remained since, gradually getting larger up to its present size, that of a large orange. For the past six months he has had almost continuous pain in neck radiating up to head. The pains are most severe at night, no pruritis or other symptoms noted.

Physical Examination: Revealed a white male well developed and well nourished. Head: Negative.

Neck: A large tumor mass about the size of an orange on the right side of neck. Palpation revealed a somewhat semi-solid mass, irregular in contour and only slightly movable. The overlying skin was freely movable. The mass was present in anterior and posterior cervical triangle. On the left side in the posterior cervical triangle there was present a hard somewhat fully movable mass about the size of a walnut. In the right supraclavicular region a hard somewhat freely movable mass was found, no other palpable glands were found over body. Chest: Negative. Abdomen: No palpable organs or tumor masses. Extremities and reflexes normal.

Roentgenogram of the chest showed no mediastinal tumor masses. Lungs were negative. Blood: Wassermann negative. Red blood cells, 4,300,000; hemoglobin, 80 per cent; total leukocyte, 7,000; neutrophils, 75 per cent; small mononuclears, 15 per cent; eosinophils, 0.

From the history of case obtained and consistency of glands involved a diagnosis of Hodgkin's disease without a biopsy was made.

Treatment: Radium was decided on in the treatment of this case. Several treatments were given over a period of 6 months. In conjunction with the radium Fowler's solution was given. At the present time the mass has decreased to about 1/3 its original size. Pains have practically disappeared from the neck. Patient has gained some in weight and says he feels much better. Roentgenogram of the chest on March 4, 1930, revealed no tumor masses.

CONCLUSION.

(1) That Hodgkin's disease is a generalized condition that may have its origin in any tissue of the body, even the skin.

(2) It is almost 100 per cent a fatal disease.

(3) Radium, roentgen-ray and arsenic are our best measures for combating this condition.

(4) Duration as to life is indefinite. From one to ten years, average four years.

(5) Biopsy is our only way of making a diagnosis and at times this is unquestionable.

(6) Hodgkin's disease at times is very hard to defferentiate from tuberculosis adenitis, lymphosarcoma and leukemia in its aleukemic stages.

DISCUSSION.

Dr. J. B. Vaughan (Monroe): I arise to discuss this paper not merely to elucidate on anything or emphasize the fact that Dr. Guerriero has brought out, but there are certain facts in regard to the treatment of Hodgkins Disease that you can't find in the textbooks.

The dissertation Dr. Guerriero has given you covers quite a lot of study and exploration of the literature that you won't find, and I am ashamed to repeat the fact that some gentleman prior to me said, in the textbooks. The mere fact that you have to attend meetings like this and hear papers that you have heard before—under such circumstances, you appreciate the paper you have had an opportunity of hearing, or you get it in literature which is going to be passed on to others.

In our experience the four cases that were treated by us were individuals, all of whom were wage earners. They came from that class of people just above the charity and below the ne'er-do-wells. The mere fact that after treatment of this kind you are able to place these people where they can provide the bread and meat for their families is certainly very interesting, not that you could promise them a cure, but you could loan them back their families for a period of time until the families could outgrow the emergency.

It is only in the last few years that people have been making any attempt whatever to treat Hodgkin's disease. They have considered it like they have a good many of the other diseases which they have tried to treat, such as cancer, that it is an incurable disease and the patient will go home and die.

My only desire is not to expatiate on the paper at all, but to bring the facts before the Society, getting this in the literature and letting it become commonly known that you can benefit these patients, prolong their lives, increase their production and give them back to their families for a few more years.

Dr. I. I. Lemann (New Orleans): What Dr. Guerriero has had to say about the diagnosis of Hodgkin's disease is eminently correct and very striking. I recall at least two instances where the clinical picture presented considerable difficulty. One was a case that I saw about twenty years ago where the diagnosis of splenic anemia had been made by one of the best clinicians in New Orleans. This man went on to die of an extreme phagedena of the pharynx, and it was only at the postmortem table that the diagnosis of Hodgkin's disease was established. It was only on the finding of the Dorothy Reed cells in the spleen and lymph nodes of the abdominal cavity that the diagnosis was made.

The other case is a recent one, one still under observation where a boy began to have fever last year after coming back from a visit to the country. The diagnosis of malaria was made on the basis apparently of blood examination. Plasmodium was said to have been found in the blood. The boy continued to have fever throughout the year. He took quinin in the most ineffective and inefficient manner only when he had fever. He was brought to the hospital with a tremendously large spleen, with only a very few and very small glands of the neck. He had, however, a loud systolic murmur which was heard away from the region of the heart under the clavicle. It was because of the location of this mumur that we were led to fluoroscope him, for we felt this mumur was not produced within the heart but probably by a pressure upon the subclavian vessels. Fluorscopy and skiagraphy showed a tremendous mass in the mediastinum. After one of the cervical glands was removed and examined the diagnosis of Hodgkin's disease was established.

The other point I wish to make is somewhat in contradiction to Dr. Guerriero's contention. I have yet to see any satisfactory result from any form of medication whether arsenical, radium, roentgen-ray, Coley's toxin, either in giving greater comfort or in prolonging life. I am glad to know of Dr. Guerriero's experience because it encourages me to go back and try some more. I wish to ask, in conclusion, whether Dr. Guerriero has ventured to use radium in the presence of fever, or whether he has waited for one of the spontaneous remissions? That is our quandary just now with the present case. He continues to have fever and we have been waiting for a spontaneous remission to use radiation.

Dr. Randolph Lyons (New Orleans): I only want to bring out one or two points that have been mentioned by the writer and by Dr. Lemann. One is the fact that no infrequently Hodgkin's disease begins elsewhere than in the cervical nodes.

I remember one case about five years ago in which a man came into the hospital with an enlarged spleen, very much as Dr. Lemann has told us about. We examined that man very carefully He had no enlargement of any peripheral glands anywhere. We made roentgenograms of his chest

and found no enlargement of the mediastinal glands. Due to the fact that he had come from the tropics, his blood was repeatedly examined for plasmodia. Even an aspiration of the spleen was made thinking he had a chronic splenomegalia of malarial origin. Nothing was found. Liver not palpable.

Because of the fact that the spleen was so large and caused considerable discomfort, we decided to have him operated on. Dr. Maes removed the spleen which was sent to the pathologist, on which he reported diagnosis of Hodgkin's disease. The patient was very much relieved by the operation and left the hospital. We didn't see him for about six months. He came back in that time with all his glands enlarged, and died a few months later.

The next point I should like to make is in regard to treatment. I can't say I am quite as optimistic about the treatment of these patients with drugs, deep roentgen-ray or radium as Dr. Guerriero is, but I am not quite as pessimistic as Dr. Lemann. I have seen Hodgkin's disease cases in which there was marked enlargement of the mediastinal glands, where they were enormous causing compression of the trachea and difficult breathing, that have been given an immense amount of relief by deep roentgen-ray treatments in which the glands disappeared as if by magic and the patient was relieved for several months. Naturally, we didn't tell the patient he was cured. After a certain length of time the glands reappeared and the same symptoms returned. Finally, neither deep roentgen-ray or radium relieved the situation and the patient died.

In the adenosarcomatous type I have also used Coley's toxins, but I regret to say I couldn't see any benefit. That type of case went down pretty rapidly, and nothing seemed to do a great deal of good.

Dr. D. O. Willis (Leesville): I am such a happy man over the subject of Hodgkin's disease that I can never miss an opportunity to say just a few words.

Perhaps most of you here are familiar with previous statements made by me that in the early days of 1914 a positive diagnosis of Hodgkin's disease was made in my own son. The diagnosis was first suspected by myself, and I brought him to Shreveport where Dr. J. C. Willis removed a gland from the right axilla, and Dr. Ellis gave me an opinion that it was Hodgkin's disease, based on the pathological picture, of this gland, and the blood findings.

I went to New Orleans. Drs. Wade, Bass, John B. Elliott, all those worthy men, went over the case and confirmed the diagnosis. Dr. Wade removed a gland from the right inguinal region, and it showed the same picture as the one examined by Dr. Ellis. I might says that the condition was generalized apparently in all of the glandular system. Nobody gave me any hopes at all. Everyone was pessimistic of the boy's outcome.

I next went to Chicago, to Drs. Billings and Rosenow. They were using Coley's serum then. I stayed with them a few days and talked it over with them, and Dr. Billings advised me to go up to Milwaukee to Dr. Yates. I went to Dr. Yates, and he was associated with Bunting at Madison. Bunting was doing the pathological and bacteriological work in this disease for Yates.

I am going to give a brief outline of the treatment. The treatment was aimed, first, at removing the possible sources of the origin, such as the tonsils, and a bad tooth that we didn't know was bad until we had a roentgenogram made. It was only diseased at the root. Then general removal of all the accessible glandular tissue was undertaken, first of the inguinal regions, the axillary regions, anterior and posterior cervical regions, and, as somebody said this morning, they took out about everything he could spare. They were then using an immunized horse serum on the theory that it was associated with this diphtheroid bacillus that Dr. Guerriero spoke of mentioning Dr. Bunting in connection with it. They gave him large quantities of the serum and they gave him radiation.

I don't know what it was that did it, whether it was any one line of treatment, or all of them combined together, but I am happy to tell you that the boy today is as sound and well as any of us, holding a very responsible position, doing the work of a real man, married, and he has a fine youngster seven years old who is in school now. He is about as happy as anybody I know. As I said, I don't know what did it, but I am going to tell you now that there is more than that one case to my personal knowledge that is well under that line of treatment.

I saw a Hodgkin's clinic under Dr. Yates, and there were present such men as the two Mayo brothers, Crile, Bloodgood and our beloved late John B. Murphy. There were sixty-five cases in that clinic at one time. That was in 1914. There were a number of those cases that were then well. I not only saw those cases, but I went over the history of them and I was as convinced that they were Hodgkin's as I was my own boy's case.

Dr. H. E. Guerriero (Monroe): In regards to Dr. Lemann's question, as whether to use radium in febrile condition or not, I am unable to answer. These cases were turned over to a radiologist for the proper treatment with radium. The cases I had under observation at no time ran temperature. These same cases weren't able to work when they

reported to me, especially one of them where the mass in his neck was so large he suffered almost continuously with reflex headaches. Since the radiation, I think he has had about five in all over a period of six months, the size of the glands has decreased almost one-third, and his headaches have completely left him. His general weight has picked up, and his anemic condition is much better. This is some index that radium does help in these cases.

As to whether radium and roentgen-ray cures Hodgkin's disease, I am unable to say. I do know there are cases of Hodgkin's disease reported in the literature as having been cured. I remember reading in the Annals of Surgery about six months ago where some doctor in the East had undertaken to remove all the cervical glands in a case of Hodgkin's disease. Two years later the patient had a metastasis to the mediastinal glands. A report ten years following the operation shows the patient in good health with no evidences of further glandular evolvement. The diagnosis in this case was proved with the microscope.

I wish to thank the doctors for their most generous discussion of my paper.

RECTAL ANESTHESIA IN OBSTETRICS.*

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In the general practice of medicine the obstetrician is faced with many obstacles, principle of which, is the elimination of pain before and at the time of delivery. It seems almost unbelievable that the profession as a whole has not accepted some form of anesthesia in obstetrics which should be as routine as the administration of laxatives in constipation.

Whether the accoucheur takes for granted that labor pains are a natural sequence of pregnancy and therefore should not be interfered with or whether there exists some skepticism on his part I do not know. I do know that in many instances, sufficient time and trouble is not taken because of the inconvenience to the operator. Since the earliest days of medicine, generally speaking, the profession has remained at a stationary point regarding the abolishing of pain in obstetrics and it seems very negligent in its administration of relief. As it is, the physician as a rule administers a few whiffs of chloroform or ether, perhaps gas, as the fetal head is making its exit over the perinium, which is usually hours after the beginning of labor and the unfortunate woman has suffered agony all this time. It is to these hours of torment that my paper is directed, and it is given in the hope that some of you who have never attempted this form of anesthesia will give it an earnest trial.

The giving of anesthetic ether through the rectum is not a new thing, nor is the use of magnesium sulphate intramuscularly, new. The utilizing of these two drugs together with a small amount of morphine sulphate so as to obtain an enchanced value from each of them is a synergistic action that was first developed in 1920 by Dr. Jos. F. Gwathmey of New York City. Since this time however, rectal anesthesia has almost fallen into the discard and only in the past two years has there been an increased activity in its usage. It is nothing short of a God-send in relieving the agonies of child-bearing. Easily administered, it can be given in the most remote cabin and requires no special knowledge on the part of the operator, therefore, it can be utilized by every accoucheur and is without any untoward effects either to the mother or to the child. The necessary ingredients can be carried in any ordinary hand-bag. Today, the manufacturing chemists have prepared for us these ingredients, ready for use with all necessary appliances at a very low cost.

In my resume of some one hundred cases, the same technic was used, as was the same formula, *i. e.*, quinin hydrobromide grs. 20, alcohol drams 2, ether ounces 2, and olive oil to make four ounces, as the rectal instillation. The routine administration was as follows: when the cervix has become dilated to the extent of two fingers, a cleansing enema is given followed by a hypodermic of 2 c.c. of a 50 per cent magnesium sulphate with ⅛ gr. of morphine sulphate.

*Read before the Louisiana State Medical Society, Shreveport, April 29-May 1, 1930.

One-half hour is allowed to elapse before the instillation of the quinin-ether solution. The anus is well greased with vaseline to prevent irritation of the skin and mucous membranes from the possible expulsion of ether. A medium sized rectal tube is inserted making sure that the tube passes well beyond the fetal head. Then, inject one ounce of plain olive oil to diminish the burning effect of the ether in the rectum. Before the oil has disappeared from the funnel or syringe, add the quinin-ether solution, then add two more ounces of plain olive oil. I mention funnel, if the gravity method is used and syringe, if pressure is used. Both methods are good. Personally, I prefer the gravity method and slow instillation, usually taking from fifteen to twenty minutes. The patient will complain of a slight burning in the rectum and may feel like expelling the instilled fluid. This uncomfortable sensation can be overcome by deep mouth breathing and by applying firm pressure over the perinium for a few minutes. One-half to one hour after the rectal medication is completed, an additional injection of 2 c.c. 50 per cent magnesium sulphate is given by hypodermic without the morphine. Now exclude all unnecessary noises and light from the room. No examination is attempted for at least an hour. In multipara, however, close observation is indicated as very often the operator will be startled from a comfortable chair by the cry of the new-born. Should labor be prolonged more than four hours, the entire treatment may be repeated with absolute safety. The synergistic effect of the drugs will be observed in about twenty minutes after the rectal instillation. The patient becomes very quiet and often times sleeps with the continual manifestation of the contractions in the form of occasional "grunts" or some movement of the body or extremities. The patient can at any time during the procedure be aroused.

There has been very much controversy concerning the ether dosage. One school advocating the dosage as depending on the age and weight of the patient. Another school suggests giving one ounce of ether to each 25 pounds of body weight. More than six ounces of a 75 per cent ether-oil solution should not be given, regardless of the weight and age.

A report from the Mayo Clinic dispenses with the use of magnesium sulphate because of the occasional production of abscess or slough at the site of injection if given subcutaneously. I have somewhat of a reluctance in comparing my results with those of the Clinic, but frankly, I have used, I am sure, as much magnesium sulphate as any one else and I know that many injections were given subcutaneously and I have yet to observe the formation of abscess or slough from these injections. I feel it is safe to say that if the well known rules of asepsis are observed, these occurrences will not take place. I might also add that it is absolutely essential that a chemically pure magnesium sulphate be used. The ordinary quality will not do. A series of over one thousand cases in which magnesium sulphate was injected without abscess or slough has been reported.

The magnesium sulphate brings relaxation of musculature. The brain is more completely protected against reflex stimulae than any other method of inhalation anesthesia as shown by the fact that the patient may at times change position or converse with the physician as in spinal anesthesia.

Colonic anesthesia is automatically maintained by the ether separating from the oil according to certain inflexible physical laws. It is not possible to have anesthesia at one time and light anesthesia at another unless deepened by rebreathing or lightened by an air-way tube. It has been demonstrated that practically any oil forms a union with ether, molecule to molecule. This union for practical purposes is not dissolved except through the process of evaporation. Because of these physical factors, the ether dosage can be accurately determined and the required dose can be administered with no risk of deepening the stage of anesthesia to the danger point. The evaporation of the ether from the oil assumes an even

steady rate of anesthesia, or analgesia, which is all that is required for use in practice. There is no irritation of the lungs. The very obvious lack of irritation to the respiratory passages from ether via the colon is explained by the fact that ether reaches the lungs from within after it has become warmed and moistened. That no irritation of the stomach and kidneys occurs is further explained by the gradual liberation of the ether from the oil in the colon. The higher brain centers are the last and the least to be affected.

The first evidence of the analgesia is shown by a sense of body paralysis which begins in the extremities and then becomes general. Mucus and saliva are usually absent as well as nausea and vomiting. The customary good color of the patient indicates that no toxic condition is brought about.

It has been shown that magnesium sulphate has positive anesthetic properties. It has been revealed that anesthesia could be produced by the subcutaneous injection of a 25 per cent solution. It has been demonstrated that a small amount of ether which alone would be insufficient to produce anesthesia, would, if given in connection with a small amount of magnesium sulphate, maintain a profound anesthetic state for several hours. When given intramuscularly, magnesium sulphate impels complete muscular relaxation but never produces excitement. The only untoward action ever found was an inhibitory effect of excessive doses on the respiratory center. The every day practical use of magnesium sulphate does not meet with any such difficulty. But, if the physician wishes to guard against possible deleterious effects, he can provide himself with an ampule of calcium chloride. This, when injected promptly, neutralizes the action of magnesium sulphate. I have yet to see the case which required this injection.

The action of the third synergist, morphine, which is used only in the first ampule of magnesium sulphate, acts in a way peculiar to itself. When given with magnesium sulphate, it appears to lock the morphine in an embrace with the body tissues, increasing its analgesic properties and causing a slower release of it from the system.

In my analysis of cases, the drugs seem to have an exciting effect on the nervous system of about 4 per cent (the same effect as is noted in liquor intoxication). At times the patient will become unruly and have to be watched and even held in bed. The effect does not last long and was thought by some to be due to the alcoholic content of the rectal instillation and for this reason the alcoholic content in some formulae has been diminished. Some patients will cry, curse or laugh. I feel these symptoms are due to the ether as the symptoms are identical to those of the third stage of a general ether anesthesia. Alcohol is merely used in the formula to dissolve the quinin. This excitation is the only unpleasant encounter, which, when it does appear, becomes very annoying in that it excites the attending members of the family as much as the patient. These occurrences in the hospital receive no special attention as the pulse always remains normal, perhaps, at times, a very slight increase will be noted due to the excitement. The following day, on questioning such a case, the answer is invariably, "I do not remember doing or saying those things." A similar answer will be given if asked asbout the pain, which assures us that the ultimate end of this procedure is successful; *i. e.*, pain relieving. In a case I recall of a primipara, after the child was born I noticed a lateral tear. On repairing this, the patient moved considerably and a little ether was given to complete the work. The patient stated afterwards that her worst pain was immediately before the rectal instillation was administered.

In 2 per cent of cases I have noticed no apparent effect whatever, but in 94 per cent there is almost if not complete, relief. No infant mortality could be attributed to the rectal anesthesia or to the drugs. Post-

partal hemorrhage is not increased nor is labor delayed. The pain is positively relieved but the contractions continue and I do not believe that there are any contraindications to this form of anesthesia excepting a colitis, ulcer or malignancy of the rectum.

I do not feel that any other form of anesthesia can be compared with the rectal type in obstetrics. Chloroform and ether have been and are used by nearly all the physicians of the interior. These anesthetics, when improperly administered, only removes the sharpness of the pain, and when improperly given, positively retards the processes of labor. The same can be said of nitrous oxide. This form of anesthesia besides is much more expensive, requiring a suitable machine for its administration which is not usually carried in the automobile of a physician. Recently, spinal anesthesia has become the vogue in obstetrics in some of the larger hospitals, but it can be readily understood that this form of anesthesia in obstetrics is not practical for many reasons. Within the past year sodium amytal intravenously has made brave efforts to the fore but on account of the great number of asphixated babies, its use cannot at present be recommended.

Unfortunately, sufficient convincing data in rectal anesthesia has not been obtained because of the negligence in publishing hospital statistics. From time to time articles are published on this subject representing the observations of a few physicians and I have yet to read the article which does not speak favorably of rectal anesthesia. There have been very few constructive articles written in the last two years. Such articles as have appeared have been on the controversy as to whether morphine and magnesium sulphate are truly synergetic. The subject is wholly academic and has little practical interest. The question that has been definitely answered in the affirmative is that the method offers a means of relief from most of the pain incident to child-birth.

My earnest appeal is sounded to you, gentlemen, especially to those of you practicing in the interior, where hospitalization is out of the question, to give rectal anesthesia a fair trial, observe closely your results, let them be known in order that the other fellow may increase his own erudition, but, above all, contribute to the relief of suffering motherhood.

DISCUSSION.

Dr. T. B. Sellers (New Orleans): This is a very practical paper and presents to us a method of analgesia and anesthesia that can be used anywhere, and that is of great value to the general practitioner in rural sections.

In my private practice, I have used nitrous oxide and oxygen for the last nine years employing a portable McKesson machine. This has been most satisfactory in my work, but it is rather cumbersome and would be difficult to carry around in the country. I do not agree with Dr. Bienvenu that nitrous oxide and oxygen retards labor because it has been proved conclusively that if properly administered it hastens labor. At times, it is even necessary that I instruct my nurse not to have the patient utilize her pains on account of the danger of intracranial hemorrhage from too rapid expulsion.

During the last two or three years, I have used rectal analgesia and anesthesia instead of nitrous oxide in about eighty cases on account of the fact that it is preferable for ignorant or excitable types of patients whose co-operation is difficult to get, and because it is sometimes impractical to have my nurse present.

Dr. Bienvenu has outlined the detailed technic for administering rectal anesthesia. This is a most important point. To get the confidence of the patient, explain the purpose of the measures to her before starting. It is necessary to get the rectal tube well above the baby's head if one hopes for success with the anesthetic agent, and

it is absolutely essential to follow out the details of the technic as outlined by Dr. Bienvenu. It is also necessary to have a nurse or a member of the family to sit by the bedside and watch the patient because of the danger of rolling out of bed and of the tendency of the tongue to drop back and obstruct breathing.

There is one objection to rectal anesthesia: the effect does sometimes wear off before the baby is born. When this happens, I supplement ether by inhalation. Dr. Bienvenu mentions repeating the rectal; this I have never done, but see no reason why it should not be done successfully.

Instead of a morphine hypodermic as a preliminary, I use heroin 1/10 gr. This drug has unfortunately been put off the market and it is, therefore, a little difficult to get. It is ideal in its analgesic effects, and it has the advantage over morphine that it has no bad effect on the respiratory system of the baby.

Dr. J. A. Danna (New Orleans): I have never used rectal ether in obstetric work but whenever you have to do work about the face and are afraid of ethylene explosion, ether by rectum is very useful and successful. If you have to, in order to get your patient thoroughly under, you can give enough additional ether to get them under. It is a very satisfactory anesthesia. Now as he mentioned the possibility of sloughing in magnesium sulphate, I have been using it for about six years for all sorts of things and conditions and have given hundreds of subcutaneous and intramuscular injections and I have never had a slough; but I take the precaution to dilute the 50 per cent solution by three or four times as much sterile water. I get about a 15 per cent or 20 per cent solution, in other words. If you will do that you will never get a slough.

Dr. D. O. Willis (Leesville): I came in late. I was not tardy but was listening at the papers in the medical section and hurried over here to try to catch this paper.

I wanted to hear this paper and if it is not out of order, I would like to ask the doctor to repeat briefly if possible his technic in the use of rectal anesthesia.

Dr. Bienvenu (closing): I appreciate the discussion as rendered by Dr. Sellers and I want to make my point clear. I have nothing against nitrous oxide if given properly but I am speaking more of the physician who has to deal with country practice. It is almost impossible for them to have gas machines, especially to carry with them at all times. As it is, we cannot know when we are called out on a case, whether it is labor or tooth-ache or anything else in the realm of medicine. I was also glad to hear Dr. Danna's remarks as a great deal could be said about rectal anesthesia as an adjunct to local anesthesia but my paper was on obstetrics and it is a little out of place to say too much on the subject of rectal anesthesia in surgery.

Dr. Danna's remarks concerning the operations on the face and other parts of the body is carried out all through the world especially in the British possessions with very good results.

The technic that the doctor asked for, is first, after the cervix is dilated about two inches, the cleasing enema is given. Then a hypodermic injection of 2 c.c. of a 50 per cent magnesium sulphate is given. One half to one hour later the rectal instillation is given which consists of quinin hydrobromine grs. 20, alcohol drams 2, ether ounces 2 and olive oil to make four ounces. There are some little details there which have to be followed very closely otherwise you will have some uncomfortable results. You have to grease the anus with vaseline because the ether sometimes will seep out of the rectum and wherever is passes over the mucous membrane of the skin, you will have a little burning. The time in which we give the instillation takes about 20 minutes. Some physicians like the fast method of inserting the solution by pressure, others like the slow-gravity instillation which, I think, is much better. A half hour after your rectal instillation is given, you can repeat the 2 c.c. of magnesium sulphate without the morphin. Now there are some physicians who may object to this because it may have some effect on the child. The dose of one-eighth of a grain of morphin is a small one and I have never perceived any bad results from asphixated babies which you could blame the morphin for.

OTITIS MEDIA.*

J. A. WILKINSON, M. D.,

HOMER, LA.

Otitis media is one of the commonest diseases which the oto-laryngologist is called upon to treat, and also one of the most important, due to the seriousness of its complications and sequelae. If seen and recognized early, and properly treated, the complications and sequelae will be few, and it is for the sole purpose of stressing these two points that this paper is presented.

Otitis media may be either acute or chronic, catharrhal or purulent. Only the acute forms will receive our attention at this time.

ETIOLOGY.

Any abnormality of the nose or naso-pharynx may act as a predisposing cause of middle ear disease. Perhaps the most common of these is pharyngeal adenoids. Deflected septum, hypertrophied turbinates and new growths are not uncommon causes. Pus in the nose from suppurative sinusitis may be forced into the middle ear by violent blowing of the nose, or may gain entrance to the eustachian tube while the patient is asleep, the pharangeal orifice becoming filled as the pus drains back to the naso-pharynx.

Of the exciting causes, the common cold is undoubtedly the most frequent. Otitis media is also commonly found in the course of the exanthemata, such as measles, scarlet fever and diphtheria. If during the course of any of these diseases, there should be a sudden exacerbation of temperature, the ears should be at once suspected. In late year, influenza has been a frequent causative factor. Other common causes are, improper blowing of the nose, the nasal douche, improperly performed, diving and swimming under water and traumatic injuries to the drum membrane.

The micro-organisms usually found are, in the order of their severity, streptococcus hemolyticus, streptococcus mucosus and the pneumococcus.

SYMPTOMS.

In children in many instances, otitis occurs during the course of an illness, as for example, scarlet fever or measles, and unless the physician makes a daily otoscopic examination, the ear condition may be overlooked until the drum ruptures and pus is seen in the auditory meatus. If the temperature remains constant, or there is a sudden elevation after the acute symptoms of the primary disease have subsided, otitis should be suspected. As a rule, otitis media, in infants and young children, is ushered in with high temperature, but this is not always true. There may be pus in the middle ear with normal, or but slightly elevated temperature. Usually pain is the earliest and most prominent symptom, but it is not always present. I have seen recently a child, five years of age, with a temperature of 105°, who had a bilateral suppurative otitis media, and no pain. This temperature had persisted for several days. Free incision of the tympanic membranes released pus from both middle ears and the temperature subsided. When a child is observed to have disturbed or restless sleep, with sudden outcrys, tossing of the head, grabbing of the ears, with fever, otitis should be thought of.

In adults in the early stage, a sensation of fullness or blocking of the ear may be complained of, due to swelling and occlusion of the eustachian tube. Pain is usually sudden and intense. The temperature is never high and may be normal.

The appearance of the drum head varies with the stage of the disease. If seen early, it may be normal in color and transparency, but a red line may be seen along the course of the manubrium, followed in a few hours by a general reddening of the drum. If fluid or pus is present in the middle ear, under pressure, there will be bulging, characterized by obscuration of all land-marks,

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the processus brevis will be less prominent and there will be a depression corresponding to the ambo. There may be sagging of the posterior-superior canal wall, a sign often considered indicative of mastoid involvement. The membrane itself will be thickened. Unless the surgeon intervenes, the pressure and bulging will most likely increase, the pain will become more intense, until nature finally gives relief through rupture of the tympanic membrane.

Fortunately, most cases of otitis recover without any serious complications, but this does not license us to treat this common disease lightly. Far too often, even with the most skillful treatment, serious, and even fatal complications develop, among which are—acute suppurative mastoids, infective sinus thrombosis, epidural abscess, cerebral abscess, cerebellar abscess, meningismus, acute meningitis, acute labyrinthitis, chronic suppurative otitis media, loss of hearing, acute nephritis, heart disease, etc.

TREATMENT.

General—1. Rest in bed should be the rule during the early stage of every acute otitis. The room should be well ventilated and of an even temperature, 65 to 70 degrees F.

2. Liquid or soft diet.

3. The intestinal tract should be thoroughly emptied.

In a few cases, when seen early, abortive treatment may be tried. The general measures just outlined should be instituted, phenol, 5 to 10 per cent in glycerin, warmed and dropped in the ear canal, and some internal medication for pain may be given when indicated. A hot water bag or electric pad is comforting as an external application. If there is much mastoid tenderness, the ice bag is the better application during the first 24 hours. The nasal mucous membrane should be shrunk with an astringent spray, such as adrenalin or ephedrine. Argyrol or neosilvol, 10 to 15 per cent solution, dropped into the nose is beneficial.

If, after six or eight hours, the pain is no better and the temperature continues high, the tympanic membrane must be incised. An ear drum should never be allowed to rupture spontaneously, if possible of prevention, as Nature's process of effecting drainage entails destruction of tissue that cannot be repaired, hence the permanent perforations that are so frequently observed in neglected cases.

Whenever the drum is bulging tympanotomy should not be delayed. Delay means unnecessary pain and fever, and oftentimes an acute mastoditis, leading perhaps to a fatal complication. A free incision should be made in the lower, posterior quadrant of the drum membrane. This is an exceedingly painful procedure and is best done under general anesthesia, preferably nitrous oxide. As a local anesthetic, a mixture of equal parts of menthol, phenol and cocain is frequently used, but, in the writer's opinion, is very unsatisfactory. If left in place long enough to produce anesthesia, there is danger of sloughing. In infants and very young children, the operation may be done very satisfactorily without an anesthetic.

Following the incision, there is always a small blood clot, which, unless removed, is likely to close the opening. It has been my practice to make a small wick of absorbent cotton and place the end of it against the drum immediately following the incision, instructing the nurse to remove it within 20 or 30 minutes, when the blood clot will come away with the cotton.

There has been considerable controversy as to the best method of keeping the ear canal clean following tympanotomy, the major portion of the criticism being directed at irrigation. The objections are that irrigation, oftentimes, does not cleanse, that water macerates the skin of the canal, conducing to furunculosis, cellulitis, etc., and that irrigation may force infection into

the mastoid cells. These are all good objections, still irrigation is probably practiced more than any other method, due to the fact that the average nurse or mother cannot be trusted to clean the ear by swabbing. Some advocate draining by capillary attraction, which is done by placing a wick of sterile gauze against the drum, and covering the external ear with a large absorbent dressing, this to be changed as often as it becomes saturated. My practice has been somewhat of a compromise between irrigation and swabbing. The mother is instructed to irrigate the ear often enough to keep it clean, two, four or six hours apart, as may be necessary, then dry the ear as best she can, with a cotton swab, after each irrigation. Even though the swabbing is incomplete, I feel that it is better than leaving the ear full of water. When possible to do so, the patient is brought to the office daily, for a thorough swabbing of the ear and inspection of the drum membrane.

The use of drops of various kinds in a discharging ear is only mentioned to be condemned. The various oils act only as an obstruction to drainage, and the dyes, such as mercurochrome, distort the field so that future examination is very difficult. It is doubtful if such medicaments ever reach the middle ear.

After all, the treatment of acute otitis media is the application of an old surgical principle, "Where there is pus, evacuate and drain."

Our treatment of otitis should not end here. Each case should be followed up until normal function has been restored as nearly as possible. Adenoids and tonsils should be removed, any existing sinus disease should be cleared up, nasal obstruction of whatever cause should be corrected, and the general health, if below par, should receive attention.

SUMMARY.

1. Where there is a rise of temperature in a child, not clearly attributable to some other condition, otitis media should be suspected.

2. Where there is a secondary rise of temperature during the course of some other disease, especially the exanthemata, otitis should be thought of.

3. If, after otitis has been diagnosed and paracentesis done on the ear, there is a secondary rise of temperature 24 to 48 hours later, the affected ear should be examined to see if the incision has closed, and examination of the opposite ear should be made to determine if otitis has developed there. It is not uncommon to find either one or both. If neither is found, the temperature may be due to some complication.

4. Pain, though usually intense and one of the most constant symptoms, is not always present in children.

5. While high temperature is the rule with otitis in children, it may exist with a low or even normal temperature.

6. The preventive treatment of otitis is removal of the cause, the most common cause being infected adenoids and tonsils.

7. Drops of various kinds are an abomination in the treatment of otitis. Exceptionally, in the first six or eight hours of the disease, the time honored phenol and glycerin may be of value, but it should never be continued day in and day out.

8. Early tympanotomy gives the quickest relief for the pain, shortens the course of the disease, and is the surest preventive of complications.

DISCUSSION.

Dr. Dawson Martin (Donaldsonville): I want to congratulate Dr. Wilkinson on his paper from the standpoint of classification. Otitis media in my humble opinion is very hard to classify. You can pick up all of the text books written on otology and I dare say that there are not two that would classify otitis media the same.

I agree heartily with Dr. Wilkinson on acute otitis media and on quite a number of things he mentions in his paper but I also disagree with

him on quite a number of things. It has been my experience in acute otitis media that just at the time that you recognize this condition is the time to do a myringotomy. If you are just beginning to have an infection of the tympanic cavity, and if you delay in doing your myringotomy, you are liable to get into serious trouble because in almost all conditions where you have congestion, you are going to have an accumulation of an exudate. If you permit it to form in the cavity, you are most likely to have a formation of connective tissue and the end results are likely to be the loss of hearing or a great disturbance of it.

I don't believe very much in putting phenol in the ear as a relief for otitis media. My treatment differs greatly from Dr. Wilkinson's. Just as soon as I recognize the beginning of an otitis media, I do a myringotomy and after myringotomy is performed I use a saline solution with an ordinary medicine dropper being warmed at body temperature, instructing the mother or nurse to instill these drops into the ear every two hours to prevent the sticking of the membranes. I do not use a hot water bag. I use ice and aspirin to control the pain should they suffer after having done a myringotomy. I have found that in almost every case where I do this early, I find that they have made an uneventful recovery without any disturbances of hearing or constitutional symptoms whatsoever. In my experience of doing otology, I use an astringent in the nose, it aids in giving more air to eustachian tube. Phenol and glycerine a lot of times disturbed the mucous membrane and obliterated my field to such an extent that I couldn't tell what I had—whether the external canal was disturbed from phenol and glycerine or not. I really believe that an otologist will do.

Dr. John T. Crebbin (Shreveport, La.): This paper is most practical and the doctor struck the key-note when he emphasizes, an early diagnosis is most essential. I firmly believe when one fails in this and procrastinates in treatment the cure may be prolonged and sometimes even the loss of the patient may follow. Early and energetic treatment cannot be too strongly stressed.

I cannot subscribe to the use of a hot water bag. Indeed, I question if an ice bag does any good either.

The time to make the diagnosis is before the tympanum bulges, for when this occurs anyone can do so. I have always felt that an early tympanotomy is necessary. If this is done many complications may be avoided.

Relative to the use of spinal anesthesia, I have had similar experience. The essayist mentioned using cocaine, phenol and menthol in equal parts. This is an old and tried remedy. Personally, I prefer giving the patient a few whiffs of ethyl chloride. The small quantity necessary is perfectly safe and the operator is then able to do a satisfactory tympanotomy.

It is not good technic to use nasal irrigations of any kind, for there is always fear of carrying added bacteria into the middle ear through the eustachian tube.

One should remember that some cases of otitis media may have but little pain and may have none, or there may be a slight rise of temperature. These are the cases which may tax the knowledge and skill of the otologist.

Dr. M. P. Boebinger (New Orleans): I want to apologize for trying to monopolize the floor by speaking twice in the same day. There were some very nice things brought out in the paper and some nice things said by those who opened the discussion.

I want to jump on my good friend, Dr. Crebbin, before I start. The doctor is opposed to washing the nasal canal. Let us say, for argument's sake, that the patient in question is an infant. What harm could you do if you irrigate mildly, put the patient in the proper position, flat on its back, and its head at an angle of 45 degrees? I claim priority for that position. If you will use a medicine dropper with a normal saline solution, irrigating each cavity two or three times at each sitting. (The eustachian tube imitating two funnels, you can readily see and understand that it is very hard to drive any solution into the middle ear.)

As far as ear drops are concerned, I mean the use of glycerin and phenol, volumes have been written on it, but I will ask a very horse-sense question. Take the ordinary base drum, turn it on its edge, put some drops on that drum head. Can you get drops on the inside—no. Therefore drops cannot influence what is going on in the middle ear. Do not forget, always remember that the baby has two ears. Pain, temperature, and deafness, is worth thinking about, therefore, I repeat watch drums daily. I wish to make a plea to you, gentlemen of the country where you can, get help to examine the ears, and make that a routine.

I use silver nitrate, in preference to anything else, I use as much as a one-quarter of a one-per cent nitrate solution as nasal drops. Lay the baby flat on its back and its head at an angle of 45 degrees, regularly, routinely. I do not use any other solution.

Dr. W. P. Coyle (Orange, Texas): Pardon me, but I think I cannot worse my lot very much, as

I have already consumed much of your time but I will not now take your time by entering into a lengthy discussion. May I use the blackboard just a minute or two? I desire to discuss the method of irrigation. I wish to show you a little invention for irrigating ears if you desire to irrigate them. In most of the homes of the poor people, there is no irrigator or fountain syringe. Of course, the fountain syringe with the proper tip makes an ideal instrument for irrigating the canal. But nearly all the poorer people have purchased one of the small, cheap (twenty-five cents) all-soft-rubber syringes. But with the ears of small infants they become useless as an attempt to irrigate with this large tip is practically futile. You will find that there are always some medicine droppers in the house on which the bulb has become hardened and useless, you will also find by selecting a straight one with the end smooth that by taking off the old hardened bulb, and placing the end of the rubber ear syringe in the tube you can irrigate satisfactorily. (Illustrates by drawing on the blackboard.)

Dr. Wilkinson (closing): The paper provoked just the line of discussion that I hoped it would and that we usually get when we mention treatment of otitis media. There is always a difference of opinion along those lines. However, I think we, in the main, are in accord.

I want to make myself clear on the conservative local treatment of this condition, as I don't personally practice local application, but we must remember that the vast majority of otitis media cases are first seen by the general practitioner, and I do believe that in the first few hours, if the case has just begun, in the absence of skilled treatment, he is justified in using these local applications in an effort to relieve the patient as much as possible, but I don't believe as I said in the paper, in using drops and local applications indefinitely.

I always think in speaking of that, of a statement that a doctor friend made to me one day, when he brought a baby to me with otitis media, who had been suffering with its ears for a week or more. He said to me, "Sometimes these ears just won't bust," and it was in the hope of impressing the fact on some others who might be of the same opinion that we should not wait for them to "burst," but open them as soon as we find that there is trouble in the middle ear. I believe in an early incision of the drum.

I want to thank those who took part in the discussion, and hope we have profited in some way by it. I thank you.

CHORDOBLASTOMA: REPORT OF CASE.

EDWIN H. LAWSON, M. D.,

NEW ORLEANS.

Among the classifying terms used to discuss and describe neoplasia are the two, common and rare. The latter term is used to designate neoplasms which are seldom seen, seldom recognized, or even when seen and recognized are only occasionally reported. Belonging to this class is the chordoblastoma or chordoma. With the purpose of adding to the number of reported cases of this neoplasm and of reviewing the literature published up to date, the following case is presented:

CASE REPORT.

The patient is a female, aged 60 years, who was admitted to the Southern Baptist Hospital, New Orleans, La., March 1, 1929, complaining of pressure and a bearing down sensation in the rectum, with pain in the lower part of the spine when sitting up. According to the patient, this condition has existed for two years. In February, 1928, she was treated for constipation by her family physician. As the condition continued to exist without relief, in March, the patient went to Charity Hospital of this city, where the condition was diagnosed as a tumor of the wall of the rectum and an operation advised. Refusing the operation, she returned home. In September, 1928, the patient went to the Woman's Dispensary of New Orleans, where she was told that her condition was inoperable and that they could do her no good.

When the patient was admitted to the service of Dr. Carroll W. Allen, of the Southern Baptist Hospital, she was rather anemic, had involuntary urination and defication and still complained of pain in the region of the rectum. A roentgenogram taken at this time showed a large mass filling the pelvis suggesive of a rather solid tumor with areas of calcification. In addition, Dr. L. W. Magruder reported, "A marked hypertrophic arthritis and osteitis involving the right sacro-iliac joint, posisbly due to pressure; and extensive hypertrophic arthritis of the lumbar spine." An examination of the urine failed to show anything abnormal. A chemical examination of the blood, as well as a total blood count failed to show anything abnormal. Dr. Allen

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Fig. 1. Skiagraph of pelvic region showing complete destruction of the coccyx and sacrum.

reported the operation, performed two days after admission, as follows: "Incision was made starting along side of the rectum and running up into the sulcus between the two buttocks, exposing the coccyx at the lower portion of the sacrum. It was found that the mass which had apparently grown from the anterior surface of the sacrum had infiltrated the bony connection of the coccyx and caused separation. On lifting the coccyx out of the wound, the tumor w s freely exposed and was found to be a large myxomatous-like mass contained within the wall of fibrous tissue. The latter had much bony tissue within its walls and free in the cavity of the tumor. About a quart of grumous granulation-like tissue was removed from the cavity. The wound was packed with a Mikulitz pack."

A gross examination of the specimen removed at the time of operation shows several segments of tissue, varying in consistency from a gelatinous mass to a light pink colored flabby tissue partially surrounded by a fibrous capsule. Some of the latter sections shows spicules of bone surrounded by the light pink flabby tissue. The pieces varied in size from 1 to 10 cms. in length, and 1 to 8 cms. in width, and ½ to 5 cms. in thickness. Some of them showed areas of hemorrhage and the larger pieces were found in a large amount of blood, suggesting a very vascular tumor. The microscopic description of the tumor conformed with the description of chordoma given later.

The patient succumbed twenty-four hours after the operation, and an autopsy revealed the following findings:

External Examination: The body is that of an adult female, 60 years of age, about 6 ft. in height and weighing about 145 lbs. There is slight post-mortem discoloration over the dependent portions of the body; post-mortem rigidity is absent. The skin over the entire body is found to be soft, elastic and rather dry. There is an incision about 5 inches in length over the sacrum and coccyx. The head is covered with long, greyish brown hair. The eyes are normal in appearance; the pupils measure about 8 mm. in diameter and are equal. The nose and ears show no pathology. The mouth is not abnormal. The teeth are in good condition. The neck shows no pathology. The chest is rather long and scaphoid in type. The breasts are rather poorly developed, but show no pathological changes. The abdomen is scaphoid and the pelvic bones are very prominent due to a moderate degree of emaciation. The extremities are not abnormal.

Internal Examination: Incision through the abdominal wall shows some atrophic changes in the recti muscles. The peritoneum is dull grey in appearance.

The organs in the abdominal cavity are found in their normal relations. The omentum is drawn down and attached to the abdominal wall at the left lower quadrant. The diaphragm extends to the fifth rib on the right; the sixth rib on the left.

On opening the pleural cavity, the lungs are found in their normal relations; the pleura is smooth and glistening, and the lungs are found to be pearly grey in appearance except at the lower lobe on right side which has a dark red color. There are no fibrous adhesions between the two layers of the pleura. There is no free fluid in the pleural cavity.

The pericardial cavity contains about 10 cc. of clear, straw colored fluid. The heart is small; the musculature rather friable. Both layers of the pericardium are normal in appearance.

Examination of the Cranial Cavity: The cranial cavity is opened by the Mallory technic. The skull is found to be normal in thickness in the areas of both parietal bons, but the occipital is found to be approximately three times the normal thickness. The bone is very spongy; it tears very easily and has a dark red porous appearance. The inside of the skull is greyish white in color and there are many furrows which average from 1-16 to 1-8 inch in depth caused by the pressure of the cranial vessels in these areas. There is one small spongy, grey area about 1 cm. in diameter which is adherent to the dura of the skull in the anterior cranial

Fig. 2. Low power magnification of edge of tumor showing the invasion of the bone.

fossa at the site of the exit of an emissary vein. The dura in this area is greyish in appearance and is apparently normal. The brain is in its normal relations and is removed from the cranial cavity.

Examination of the Organs: The heart is slightly smaller than normal and rather flabby and friable; otherwise, normal.

Lungs: The outer surface of the lungs is found to be smooth, glistening and pearly grey in color, with the exception of the lower lobe posteriorly which has a dark red appearance. There are no areas of caseation and no signs of pneumonia.

The gall bladder is approximately 10 cm. in length and about 3 cm. in diameter and is filled with deep green colored bile. There are no stones present. It empties with difficulty.

The spleen is found to be normal in size and shape. The outer surface is rather wrinkled and of a grey blue color. There is an increased amount of fibrous tissue throughout the spleen.

The liver is in its normal relations. The outer surface is a ham brown color. Incision through it shows a reddish brown appearance with some slight evidence of fatty degeneration.

The kidneys are found in their normal relations; are normal in size and shape; and the capsule peels rather readily from each organ. Upon incision into the kidneys, the cortex and medulla are found to be of normal size. The cut surface is a light pink color, and is fairly smooth.

The gastro-intestinal tract is found to be normal with the exception of a slight dilatation of the stomach. The appendix is found retrocecal.

The adrenals are in their normal relations and show no pathology.

The pancreas is apaprently normal.

The genital tract shows a small uterus, with normal tubes. Both ovaries are small, fibrotic, and measure about 1½ cm. in diameter.

The brain shows some congestion of the blood vessels with some slight edema around these vessels. There are no signs of any meningitis.

Upon enlarging the incision over the sacrum and lower lumbar vertebra, there is found a growth which is of a gelatinous consistency and a dull grey appearance. It is associated with a large amount of hemorrhage. It measures about 16x12x12 cm and is partially encapsulted with fibrous tissue, but extends laterally as well as as anteriorly and upward so as to involve the entire coccyx, sacrum, and the lower three lumbar vertebra. These are almost completely destroyed. The growth is found to be pressing dorsally upon the lower part of the spinal cord, and medially upon the organs of the pelvis, causing some swelling there.

Gross anatomical Diagnosis: Chronic myocarditis and nephritis.

Hypostatic congestion of the right lower lobe of the lung.

Chordoma involving the coccyx, sacrum and lower three lumbar vertebrae.

Osteoporosis of the occipital bone.

Endothelioma of the dura.

Microscopic Diagosis: Heart—Chronic myocarditis.

Lungs—Passive congestion.

Spleen—Congestion and chronic fibrous splenitis.

Liver—Beginning inter and intralobular cirrhosis.

Adrenals—Not abnormal.

Kidneys—Acute tubular and chronic interstitial nephritis.

Beginning fibrosis of the salpinx.

Atrophy of ovaries with corpora albicans and few follicular cysts.

Fig. 3. Chordoma removed by Dr. L. H. Levy, reported by Dr. Lanford. Note the tumor measures about 9 cm. in diameter.

Chordona involving the coccyx, sacrum and lower three lumbar vertebrae, filling the posterior cul de sac.

Localized traumatic meningitis of the caudal portion of the spinal meninges.

Small endothelioma of the dura. Osteoporosis of the occipital region of the skull.

HISTORY.

The history of chordoblastoma dates back to the classical researches of Müller and Ribbert. In 1858 and 1894, when the pathology of the tumor was first established, Ribbert reproduced the tumor by displacing some of the cells in the nucleus pulposi of a rabbit. Another one of the early cases reported by Trêlet and Ranvier in 1868, as a tumor of the vertebral column, was most probably chordoma. In 1914 and 1922 Alezais and Peyron demonstrated in great detail the histogenesis and evolution of the tumor. Since that time Eckel, Jacobs in 1925, Coenen in 1925, Stewart and Morin, 1926, Scapel, 1928, and Huddon and Young in 1929, have all reported cases and reviewed the previous history of chordoma.

Perhaps the most complete and comprehensive treaties on the subject is that of Stewart, M. J., 1926 referred to above. He reports fifty-seven cases which he has classified according to location. Later Cappell added sufficient cases to bring the total to eighty. Since that time, I have succeeded in finding five reported cases as follows:

1. Malignant nasopharyngeal chordoma by E. Soukup.

2. Sacrococcygeal chordoma with extensive matastasis by C. A. Conway.

3. Malignant sacrococcygeal chordoma of the dorsal spine, Huddon and Young. (2 cases).

4. Unusual location on superior maxilla of new born infants by S. Rubaschow.

The above with the addition of the following cases, one at the Touro Infirmary (personal communication from Dr. J. A. Lanford) and at one Charity Hospital (reported at Charity Hospital Staff Meeting by Dr. R. D'Aunoy), with the reported case here, brings the sum total to eighty-eight on record.

DEFINITION AND ORIGIN.

Chordoblastoma may be defined as a neoplasm developing from misplaced remnants of the notochord or chorda dorsalis. According to L. W. Williams, the latter arises from entoblastic tissue and appears in the early embryoes as a longitudinal ridge of the cells projecting dorsally from the entoderm. Later this ridge of cells gradually becomes pinched off and by the end of the fourth week of development is surrounded by a thin structureless membrane, which later ossifies forming the bodies of the vertebrae. When the embryo is four months of age, the chorda becomes discontinued in places and in adult life, the only remnant is the transformed chorda cells which are found in the nucleus pulposi of the intervertebral disc. The relation of notochordal tissue to chordoma is discussed by Froriep, who found small masses of tissue in the retropharyngeal connective tissue of a 22 mm. embryo, which were very similar, both to the adult notochordal tissue pictured by Kolliker and Frick, and to the tissue of chordoma. If, during the development of the vertebrae, portions of the notochord escape into the surrounding

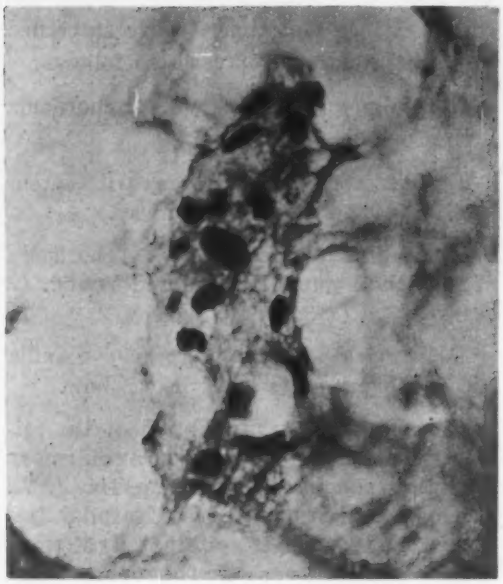

Fig. 4. High power magnification of cells of the nucleus pulposi obtained from the intervertebral disc of a 4 months fetus. Note the syncyteal mass, some of the cytoplasm showing vacuoles similar to the cells of a chordoma.

tissue, it undergoes a typical cytomorphosis and forms adult notochordal tissue which is in all essentials like chordoma tissue. If this process takes place in the skull, we should expect to find notochordal tissue forced by the first chondrification of this region, that of the dorsum sellae, either forward into the hypophysical fossa, or backward and upward upon the dorsum sellae. Other positions would be the sphenoidal and the occipital cartilages or bones.

Chordoma of this region occurs most frequently upon the dorsum sellae and less frequently in the hypophysial fossa and at the spheno-occipital junction. Fischer and Steiner reported a case, the location of which was the upper surface of the baso-occipital bone. According to L. W. Williams, the majority of chordomas are comparable to cranial nuclei pulposi and should not be regarded as an abnormal growth of notochordal tissue, but merely a normal growth in an abnormal position. The two most common locations for this type of neoplasia are in the spheno-occipital and the sacro-coccygeal regions. In the first mentioned, the most common site is the middle of the clivus in the region of the spheno-occipital synchrondrosis. Other rarer types are the upper and lower jaw, a case of which was reported by Koritski, the left occiptal region, a case reported by Alevais and Peyron, the pharyngeal region, cases of which are Linck, Klebs, Fabricus-Moller and Citelli, and the cervical spine, a case reported by Trelet.

MORBID ANATOMY OF CHORDOMA.

Chordoma should be distinguished from the non-neoplastic nodules of chordal tissue occasionally found on the clivus. These jelly-like nodules attached by a slender pedicle to the middle of the dorsem sellae are called ecchordosis physaliphora by Stewart and Morin. The latter believes that a clear cut line of distinction should be made between the chordal ectopia and the chordoma which is a true neoplasm of the notochord.

As illustrated by the case presented, the naked eye appearances of chordoma may take the form of an encapsulated tumor broken up into lobules by fibrous trabeculae, each lobules being composed of a periphery of semi-transparent gelatinous tissue with the central area of either soft jelly-like material or old or decent hemorrhage. This gelatinous appearance of the tumor resembles the more myxomatous type of mixed salivary gland tumor or colloidal carcinomas, while the hemorrhagic areas suggest hypernephroma.

The consistency of the tumor depends upon the formation of the mucin which is in an inverse ratio to the rate of the cellular multiplication and increasing malignancy. The tumor has a locally destructive effect on bone as is illustrated by this case. This is one of the most striking features of chordoma whether of the spheno-occipital or sacrococcygeal type. Metastasis is rare, but cases have been described by Stewart, 1922, by Peters and Pototschnig, by Lewis, and by Davidson and Weil.

Sacrococcygeal chordoma may obtain a fairly large size. The one reported by

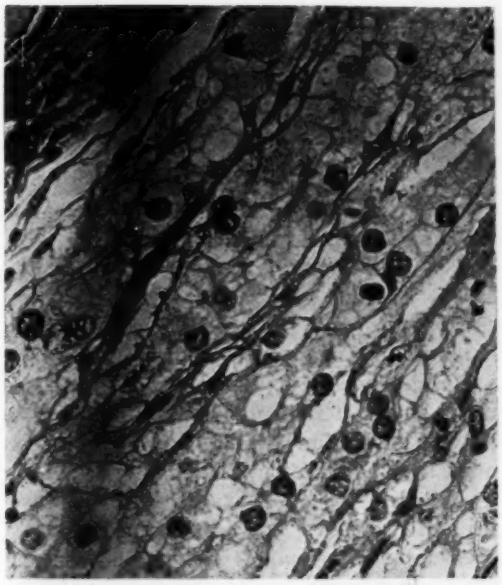

Fig. 5. High power magnification showing the arrangement of the cells. Note the amount of vacuolization of the cytoplasm.

Stewart measured 39 by 20 cm., and one by Berard Dunet and Peyron measured 26 by 22 by 15 cm. in diameter, and each measured 80 cm. circumferentially on the outside. The spheno-occipital chordomas never attain a size approaching these dimensions. The largest was Jeliie and Larkin's, which measured 11 by 7 by 6 cm.

MICROSCOPIC DESCRIPTION OF CHORDOMA.

The histologic appearance of this neoplasm varies in different specimens of tumors and even in various areas of the same tumor. Among the cases reported are those in which the large per cent of fibrosis is a predominating character, while in others, the production of mucin seems to be the outstanding feature. In the larger per cent of cases there seems to be a fibrous capsule, more or less dense, surrounding groups of rapidly growing cells, which are either arranged in cords or solid alveoli. As the central portion of the tumor is reached, the percentage of mucin increases. In the periphery where some of the cellular elements have broken through the capsule and invaded the bone, there is frequently found varying degrees of hemorrhage. The groups of cells in the periphery of the growth are separated by a delicate connective tissue stroma. The type cell is generally irregularly polygonal in shape with clear demarcated cell boundaries and a rather empty pale cytoplasm. The nucleus is well defined, usually single and has a poorly developed chromatin network. It is generally vesicular in type and sometimes possesses certain curious nuclear changes. These changes include the nuclear vacuolation, a feature on which Stewart, 1922, laid great emphasis in his first case. These nuclei are distended with globules, the nature of which could not be determined by D. F. Cappell in 1928, as they failed to give the characteristic staining reaction for mucin or any other known substance. The cytoplasm of some of the cells is clear, while that of others shows lobules of mucinous substance, the true so-called physaliphorous cells of Virchow. The mucinous secretion, however, is not confined to the cytoplasm of the cells at all, as areas are found in which the secretion seems to be mostly extracellular forming an abundant inter-cellular matrix. By differential staining, it is found that the secretion both intra and intercellular is not homogenous in character. Some of the secretion appears to be mucin when stained with polychrome methylene blue and some appear as collagen when stained with van Gieson's stain. These observations wou'd tend to confirm the view of Peyron that transition from mucinous secretion to collogen are met with. Mitotic figures are found in many of the cells of most of the tumors reported. However, appearances suggesting amitotic division are met with in a few of the cases. Near the periphery of the growth and especially in the area of invaded bone are found large nucleated cells, the nucleus of which is almost twice the size of that of the average cell. These cells are apparently of the more rapidly growing and undifferentiated type. The stroma of the tumor is composed of dense fibrous tissue at the periphery which extends toward the center in fine strands between the larger masses of tumor cells. In some areas where

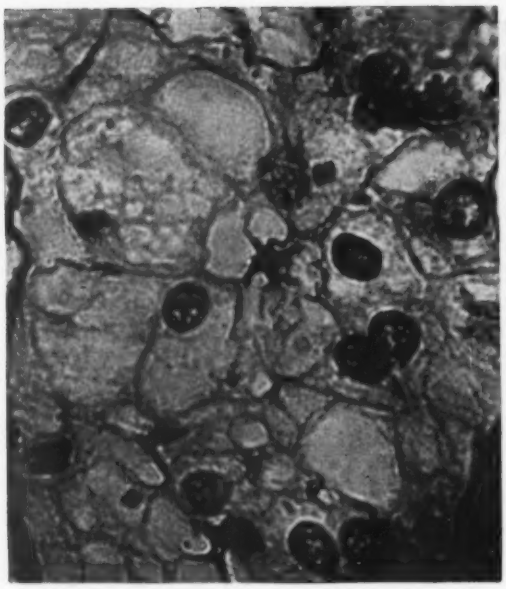

Fig. 6. High power magnification showing the physaliforous cell. Note the large nuclei oval in shape and the vacuoles in the cytoplasm.

the percentage of mucin is great, the stroma has the appearance of the stalk of a villous papilloma. Blood vessels are not very numerous. There is a moderate amount of round cell infiltration and several phagocytic cells containing the altered blood pigment are present in the areas of hemorrhage.

CLINICAL ASPECT OF CHORDOMA.

Clinically, chordomas usually pursue a course characteristic of a tumor of low malignancy. They infiltrate and tend to destroy the surrounding structures slowly and when removed frequently recur. In exceptional cases, the growth is rapid. Metastatic growths have been reported by Lewis, Mathias, and others. It is interesting to note that chordoma is a neoplasm of middle and post middle life, the average age being 50.6 years with the youngest age being 22 and oldest or eldest 72. Of interest also is the sex incidence which shows males to represent 70 per cent of the cases. The various symptoms displayed by this neoplasm depend, of course, on its location. For example, chordomas of the spheno-occipital synchrondrosis usually produce headache, failure of vision, exopthalmos, dizziness, etc., the various symptoms of intra-cranial pressure. It is of interest to note that the failure of vision was one of the first and most common symptoms of the ten cases reported by Stewart.

Tumors of the sacrococcygeal type were first noticed by pain in the rectal region in six cases, complete constipation in five, and frequent micturation in five of twenty-nine cases reported by Stewart. The case of chordoma of the dorsal spine reported by Huddon and Young first showed a staggering walk and later reflexes suggesting an involvement of the spinal cord. The course of the tumor in its development and enlargement may be traced by the variety of symptoms produced. For example, in the case presented above, the first complaint was pressure and a bearing down sensation in the rectum, with constipation and pain in the lower part of the spine when the patient was sitting up, suggesting an involvement possibly of the bodies of the vertebra with intrapelvic pressure against the colon and sigmoid. Later the patient developed an inability to control the bladder and rectal sphincters, suggesting the fact that the tumor had not encroached upon the spinal cord and nerves.

The prognosis of chordoma whether of the spheno-occipital or sacro-coccygeal region is not encouraging. The average duration of life after the first symptoms are noticed is approximately six and a half years in the sacrococcygeal cases; and two and eight-tenths years in the spheno-occipital cases.

Surgical extirpation is advocated by Stewart and Morin on account of the long freedom from return which is sometimes obtained, and the possible amelioration of symptoms. In several of the reported cases, the removal of a portion of the growth was followed by a shrinkage in the size of the remaining portion, causing a certain amount of relief to the patient. Treatment by radiation is almost without effect, probably on account of the indolent, slowly growing character of these tumors.

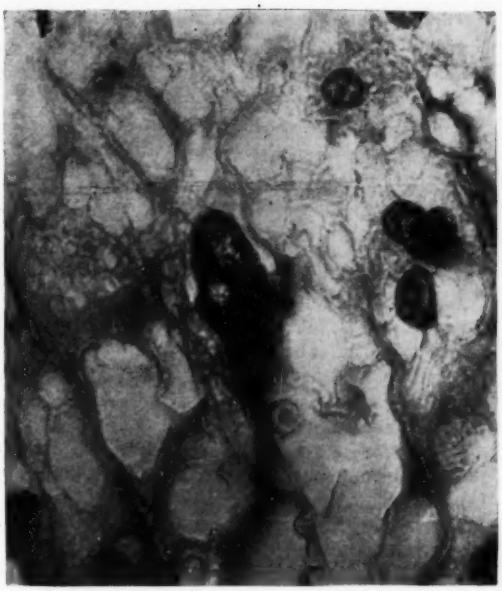

Fig. 7. High power magnification showing a vacuole in the nucleus of one of the physaliforous cells, illustrating the phenomena stressed by Stewart in 1922.

DISCUSSION.

Dr. J. A. Lanford (New Orleans). There is very little that I wish to add except to stress certain facts which Dr. Lawson brought out.

First, I want to say that this neoplasm represents one that springs from a cell rest and therefore might be used as an illustration of Cohnheim's theory that neoplasm springs from cell rest. It comes from the remnant of the chorda dorsalis which is a normal development in human beings in the fetus but ordinarily disappears entirely in post-fetal life. It is also a normal development in the spinal columns of a variety of fish, particularly the sturgeon. However, autopsy findings have revealed that there are a number of individuals who naturally have in their structure a remnant of the chorda dorsalis particularly located in the closets of the sphenoid bone, and a number of different authorities have reported finding these remnants in the intervertebral disks. and in the pelvis in the area of the coccyx and the sacrum.

It is an interesting fact that practically all shown neoplastic tendencies occur either in the upper pole, the sphenoidal area, or the lower pole, from the sacrum into the coccyx. In either of these locations, there is interference with the normal function of the part with gradually increasing symptoms, final infiltration of the part, and the production of so much discomfort that the advice of the surgeon is sought. If the neoplasm springs from the sphenoidal region there is a slow developing neoplasm behind the pharynx encroaching on the nasal pharynx, and becoming quite uncomfortable and troublesome. That location may be the seat of secondary infection which will probably take off the patient.

In the lower pole in the sacrum or the coccyx, these new growths may spring either anteriorly in the pelvis or posteriorly on the outside. I have seen only one case in life. I have seen tissue from three other cases.

The location of the neoplasm and the type of the gross appearance, that is, the mucoid growth separated into a number of lobules by white fibrous connective tissue, and a history of a low growth, should suggest to the surgeon the possibility of what the neoplasm is because there is no other neoplasm which in any way resembles this chordoma, either normally or microscopically.

The first case I saw was one in which the tumor was removed. The picture shown by Dr. Lawson was an old man about 70 years of age who simply complained of an uncomfortable sensation when lying on his back. He asked that this be removed to render him more comfortable and enable him to sleep. Unfortunately, the man was a poor surgical risk in that he had marked chronic interstitial nephritis, and he died within one week after the operation was performed. Autopsy was refused.

The second case I saw was the tissue sent to me by Drs. Ellis, Faulk and Crowley. It showed gross appearance of neoplasm, and the microscope showed the usual symptoms. In correspondence with Dr. Ellis, he replied he had seen one such case operated on by Dr. Murphy of Chicago, and the symptoms he had in his case were practically identical with those of Dr. Murphy's.

Dr. J. W. Faulk (Crowley): Dr. Lanford referred to this case with Dr. Crowley. I had the privilege of assisting with the operation. The man was about sixty years of age, and he came in with the tumor mass in the sacrococcygeal region. We operated this man and made a tentative diagnosis of chordoblastoma. We removed part of the tissue and sent it to the Tulane laboratory for analysis, and Dr. Lanford sent the report. This patient lived about five days following the operation.

Dr. Lawson (closing): During the past year, several attempts to produce a chordoma by displacing some of the cells of the neucleus pulposi in rabbits, using the technic of Ribbert, have been unsuccessful, the rabbits succumbing to intercurrent infection.

In closing I wish to thank Dr. J. A. Lanford and Dr. J. W. Faulk for their interesting discussion.

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THE ANNUAL STATE MEETING.

The Fifty-Second Annual Meeting of the Louisiana State Medical Society to be held in New Orleans the week of April 13, bids fair to equal or to surpass any previous meeting that the state organization has ever held. This is not said in any spirit of boasting, but reflects merely the progress that we anticipate and hope will always take place in all of our medical activities, particularly in the annual meeting of the state association. By the time this editorial reaches the eyes of the reader, they will have received the program of the scientific sessions and social activities that will take place during this week in April, when New Orleans will welcome with open arms the doctors of the state. We wish to go on record that they will indeed be most welcome to the city, and everything possible that can be done to make them welcome, happy and contented will be carried out. Of course the main function of the organization's annual meeting is to present the advances in medicine that have occurred in recent years by essayists who have taken time and trouble to get together their material, but the social care of the individual visiting physician is likewise of importance. Much more happiness and enjoyment can be gotten out of a meeting if during the hours of relaxation that comes after a long day session, they can be assured that pleasures await them.

On account of the present economic situation, doubt has been expressed concerning the ability of many of our members to attend this meeting. We wish to stress the point that this meeting is *the* meeting of the year that they should attend. As far as expense is concerned, the hotel rates are not high and the cost of food in New Orleans has been reduced to a minimum. The expenditure of a few dollars at this time will more than repay a man who is worried and disturbed by situations at home. Now is the time to get away for short periods, at least, and forget the trials and tribulations of the present day. Come to New Orleans with a mind keen to learn and anxious to obliterate present day worries for a period of time. It would do every man in the medical profession in Louisiana good to get away from his work for a week and no time is like the present. So

do it now. Come to the meeting prepared to learn and to enjoy. New Orleans welcomes you!

THE SPECIFIC INFECTIOUS DISEASES.

The recent mortality statistics of Louisiana for the year 1929 bring to light some interesting data in conjunction with the occurrence and frequency of the specific infectious diseases. The figures illustrate most magnificently the excellent results that have been obtained in the limitation of the dissemination and spread of these diseases. Typhoid fever, for example, has occasioned only 222 deaths in the year 1929 in Louisiana, whereas 25 years ago the death rate was in the thousands. Not a single death occurred from smallpox. Malaria caused 203 deaths; probably each and every one of these deaths could have been prevented. The malaria death rate in Louisiana, however, is much less than it is in the neighboring states of Florida, Alabama and Georgia. In the first state, there were 441 deaths in 1929, in Florida 480, and in Georgia, 683. Of course it is possible to see that many of the cases of malaria were mis-diagnosed in those states where the death rate was so high. Probably this was true in Louisiana, but on the other hand credit must be given to the great bulk of our profession for demanding positive blood smears for the diagnosis of malaria. Meningococcus meningitis is on the increase, 65 deaths occurring in the state, whereas one-third of the number of cases of acute anterior poliomyelitis occurred in 1929 as compared with 1927. Of all the infectious diseases excepting tuberculosis, syphilis is way to the fore. There were 555 cases of syphilis diagnosed as such on the death certificates. A truer picture of the incidence of syphilis and its importance in causing illness and death might be obtained were it possible that the doctor would be willing to put this down as a cause of death in his private clientele. No doubt syphilis also caused death, or was directly responsible for it in those individuals who died of aneurysm (241), in many who died of heart disease (1,335), or cirrhosis of the liver (209). It might be added that the doctors in Louisiana are probably more truthful than their colleagues elsewhere in the United States, as a total number of deaths from syphilis in this country was 16,188 among 1,386,363 deaths from all causes, a much higher proportionate rate in Louisiana than is shown by the figures from all the states in the country as a whole.

Of the known to be non-infectious diseases that are of interest to our section of the country, pellegra caused 285 deaths, 50 more people dying of this disease than died from diabetes mellitus. In Georgia there were 878 pellegra deaths, in Alabama 667, and in Florida 315. These figures well illustrate the importance of this disease, particularly when one considers that it is rather exceptional for a pellagrin to die directly as a result of a disease. If the death rate is as high as it is, it certainly must indicate that there are a tremendous number of patients suffering from this disorder. In conjunction with pellegra it may be said that there were 6,793 deaths from this cause in the whole United States, and that practically all of them occurred in the Southern States.

One might conclude from a study of these statistics that most of the infectious diseases are well under control as a result of public health measures and the intelligent cooperation of physicians with the

public authorities; that apparently tuberculosis and syphilis are by far the most common causes of death in the list of infectious diseases; that the menace of these two dreaded diseases is ever before us and that they should be and must be abated before it can be said truthfully that we have largely gotten rid of transmittable diseases.

THE THYROID HEART.

It is an apt aphorism that proper diagnosis is the basis of all treatment, whether it be surgical or medical. This applies particularly and with considerable force to the recognition of thyroid disease, a condition often unrecognized and presenting many unusual manifestations, which may cripple patients because it is not properly differentiated from some other disorder and hence improperly or inadequately treated. It is always unfortunate when such diagnostic difficulties arise, especially if the thyroid disturbance is quite pronounced as the patient is not given the opportunity of being helped, as they can be, by thyroidectomy. Both the surgeon and the practitioner should appreciate the fact that, as Levine* has so critically pointed out, the symptoms of hyperthyroidism may be obscured by the more obvious cardiac symptoms. Often the underlying casual factor, the thyroid dysfunction, is not recognized and the patient is presumed to have only heart disease. There exists most certainly a definite group of patients who are treated for heart disease but who also have a latent and unrecognized hyperthyroidism. One of the important diagnostic criterion for the recognition of the condition is a high basal metabolic rate. The heart condition is no bar to operation, and these people are relieved by subtotal thyroidectomy. Levine stresses the occurrence of thyrotoxicosis unrecognized in many instances because of failure to appreciate evidence of increased metabolism but Morris* believes that many cases of thyroid heart disease exist with a low basal metabolism rate, in patients whose cardiac disease may be materially helped by a thyroidectomy. Unfortunately and frequently, the myocardium has been definitely damaged by the thyroid intoxication, but in many instances to a surprisingly degree such patients have improved in spite of the fact that their basal metabolic rate has been low when the subtotal thyroidectomy has been performed. In this group of patients the response to operative procedures differs in no way from that of patients who have comparable symptoms plus an increase in the metabolic rate.

The lessons to be learned from these two papers are: be everlastingly on the watch for thyroid disease; have metabolic estimations made on patients who present symptoms of heart disease of an indefinite etiology; recognize the fact that heart disease due to thyroid involvement may be seen, as Morris expresses it, even after the thyroid burns out; and to grasp the fact who may or may not have increased metabolic rates may be materially aided and often practically cured by a subtotal thyroidectomy.

*Levine, Samuel A.: Unrecognized hyperthyroidism masked as heart disease, Ann. Int. Med., 4:67-80, 1930.

*Morris, Roger S.: The "thyroid heart" with low basal metabolic rate, Am. Jour. Med. Sci., 181:297-301, 1931.

HOSPITAL STAFF TRANSACTIONS

CLINICO-PATHOLOGICAL CONFERENCE AT OUR LADY OF THE LAKE SANITARIUM.

A Clinico-pathological Conference was held at Our Lady of the Lake Sanitarium on March 4 with the following physicians present: Jas. M. Adams, W. H. Cook, S. J. Goldfain, W. K. Irwin, T. S. Jones, L. F. Lorio, C. A. Lorio, J. H. McCaa, H. G. Morris, H. T. Nicolle, T. C. Paulsen, H. G. Riche, J. J. Robert, E. O. Trahan, C. A. Weiss, L. J. Williams, and J. A. Tucker.

The meeting was presided over by Dr. Riche.

The following cases were discussed:

1.—Hyperthyroidism by Dr. T. S. Jones.

2.—Perforation of the intestines, by Dr. C. A. Lorio.

3.—Cirrhosis of the liver and amebiasis by Dr. E. O. Trahan.

The following is a synopsis of the cases:

Case No. 1.—Miss Mary M. White, female, age 30. Admitted Jan. 16, 1931. Discharged Jan. 26, 1931.

Chief Complaint.—Nervousness and tightness of throat about December, 1929. Consulted physician 2 months ago. At that time she had lost a little weight. Temp. 99.4°, pulse 120°. Twitching and nervous. Left lobe of thyroid noticeably enlarged. Three B. M. R. were widely different, made on the same day, with same machine and by same technichian. Later a test was normal. She was placed on a non-stimulating bland diet, laxative, quiet life, phenobarbital drachm 1 four times daily. Lugol's solution M x t. i. d. One week ago she was advised to add to the above, digitalis m VI t. i. d. and alkazone drams half twice a day and to rest some each day.

Physical Examination.—Temp. 99°. Height, 65 inches. Weight, 105. Pulse 80 regular. B. P. 120/80. Respiration 18.

The remainder of the examination was negative except for an enlargement of the left lobe of the thyroid which is also rounded.

Laboratory Examinations.—Jan. 17. Urine neutral, 1012, positive indican. W. B. C. 8,750, L 37, M 8, P 53, E 2.

Operation, Jan. 17.—Thyroidectomy using low collar incision. The findings at the operation were a right lobe enlarged 100 per cent with about 25 per cent of normal gland left at the upper pole. Muscles adherent to cyst and capsule on the right side.

Progress Notes.—Patient made a rather uneventful recovery being nauseated for the first two days and severe reaction. Sutures were removed on Jan. 26 when she was discharged as cured. She was instructed to remain quiet for a week and to take Lugol m V and Elix. Phenobarbitol drachm 1 tid.

Case No. 2.—Mr. E. J. W. White, male, age 35, Admitted Jan. 23, 1931, died Jan. 27, 1931.

Chief Complaint.—Patient admitted to the Sanitarium in a jaundiced condition with pain in the lower abdomen and constant vomiting. Complains that his kidneys do not function properly.

Past History.—Negative except for previous dysentery of some duration.

Physical Examination.—Entirely negative except for jaundice.

Laboratory Examinations.—Urine: acid, 1.009, albumen 15 per cent, no casts, large amount of pus and pus clumps. Stool: occult blood present, mucus large amount, ova and parasites none found. Hb. 55 per cent, C. I. 0.63, RBC 4,000,000, WBC 4,750, L 13, M 3, P 84, No plasmodia found. Wassermann negative. Jan. 27, 1931, patient vomited frequently sometimes clear and sometimes bloody. His stools were at times greenish while at other times they were dark and contained blood. Patient also had nosebleed.

Temperature ranged from 96° to 100.6°. Pulse from 65 to 100.

Treatment.—Emetine gr. ss, purgation, flushes, hot packs, and saline drip together with gastric lavage.

Patient did not retain nourishment and did not void. He had to be catheterized.

Working Diagnosis.—Acute nephritis, cholecystitis, hypertrophic liver, probable gastric or duodenal ulcer.

Body of white male 35 years old. Body length 66 inches; well nourished; jaundiced; pupils dilated; no rigor mortis present; post mortem lividity present.

Chest.—Both lungs are apparently normal, except for hypostatic congestion. Microscopical shows hyperaemia and some of the air cells are filled with pneumonic exudate in various stages, while others show an edematous condition. Heart apparently normal.

Abdomen.—Stomach is normal externally. There is no evidence of ulcer. The mucosa shows

a very large number of petechial hemorrhages. The microscopical examination shows an extreme hyperaemia especially near the surface of the mucosa. Other areas show petechial hemorrhages. The muscular coats are not hyperaemic.

Small intestines show hemorrhages in the omentum. These are of various sizes. The intestines are distended with gas. On opening the lumen, the terminal ilium shows a large number of papillomatous growths. In between these, there are placed irregularly on the wall with no special reference to Peyer's patches or direction of the gut.

Large intestines show numerous, various sized ulcerations, some partially healed while others are apparently more active. There are also a few hemorrhagic areas. At the ring formed by the ileocaecal valve, there is an almost complete ring of ulcers. Appendix is normal, retro-caecal.

The miscroscopical examination shows the papillomatous areas to be composed of a protruding portion which consists of necrotic material resting on the surface of a hyperaemic tissue composed of round cells leukocytes, connective tissue cells and broken down cells. All glandular tissue in the section has been destroyed. There are petechial hemorrhages. A few amoeba can be seen.

Spleen is extremely large measuring 14x16x6 cm. It is friable. The capsule tears easily. On section the pulp is dark purplish with the trabeculae well marked. The pulp scrapes off easily. The microscopical shows an hyperplasia of connective tissue. The organ is filled with blood. The Malpigian corpuscles are ill defined. In certain areas there is found a very large amount of blood but practically no pulp.

Liver is greatly enlarged. Mottled yellow and green. On section the mottling is more apparent. There is apparently an increase of connective tissue. The gall-bladder is full. The duct is somewhat kinked by a few adhesions. There are no stones. The microscopical examination shows the hyperplasia of connective tissue, the bile capillaries are apparently distended and deeply stained with bile. In certain areas there is apparently a beginning of fatty degeneration.

The kidneys are very large measuring 15x8x5. The capsules peel off easily leaving a smooth surface. On section there is as a thickening of the cortical portion. The entire organ is hyperaemic. The cortex measure 15 mm thick. On microscopical examination there is a general hyperaemia, cloudy swelling of the epithelium of the convoluted tubules.

The pancreas is increased in size, hard. The head especially is much larger than normal. The microscopical examination shows a slight increase of connective tissue but no malignancy.

All the organs of the body are bile stained.

The contents of the entire gastro-intestinal tract is black and contains a large amount of blood.

Pathological diagnosis.—Hypertrophic cirrhosis of the liver; acute spleenitis; gastric hemorrhages; acute nephritis; pancreatitis (?); amebic dysentery.

Mr. J. W., admitted Oct. 24, 1930, died Feb. 18, 1931, age 32, white male.

Chief Complaint.—On the night of October 23 patient was stricken with a cramp like pain, extending all over the abdomen. The pain was accompanied with nausea and vomiting. It lasted throughout the night and on consulting his physician was advised to come to the Sanitarium.

Operative Record.—Oct. 24. On opening of the abdomen, free fluid and fecal material was found. There was a rupture of the small intestine. Appendix normal, pylorus normal, gall-bladder normal, liver adherent to anterior abdominal wall. Small intestines distended. A drainage tube was inserted in the small intestines. This was brought out through a small stab wound in left lower abdomen.

Due to intestinal obstruction an enterostomy was performed.

Jan. 26. On this date an entero-enterostomy was again performed.

Laboratory Reports.—Oct. 24, Urine, alk, 1023, albumen trace, WBC 14,000, L 7, M 2, P 90, E 0, B 1; Widal negative; Wasserman Negative. L 9, M3, P 88, E 0, B 0. No plasmodia found.

Temperature of septic type. Respirations were between twenty and thirty.

Treatment consisted of Dakin and saline irrigations of the wounds, saline and glucose drips, and symptomatic medication.

Partial autopsy.—The liver, stomach, pancreas and small and large intestines were removed.

Liver measured 25x16 10 cm. Mottled gray and pink. It was adherent posteriorly. There were also adhesions anteriorly to the omentum and longer adhesions to the small intestines. The gall-bladder measured 10x6 cm.

The stomach was thickened on the lower curvature. There was no ulcer found.

The small intestines were all matted together by old adhesions. Certain areas felt thicker than others. There were two distinct perforations and there was one anastamosis.

The large intestines were thickened in areas. This was especially noticeable about six inches above the sigmoid, where there was a perforation.

All of the mesenteric glands were enlarged.

Microscopical.—Liver shows extreme fatty degeneration with an occasional small area of fairly normal liver cells. There is a general hyperaemia.

Small intestines.—These show an organized exudate over the peritoneal covering. There is a general hyperaemia with a leukocytic infiltration. There is hyperplasia of fibrillar connective tissue in the submucosa. There is an inflammatory reaction in the mucosa with cloudy swelling and granular degeneration. In many instances folds of the mucosa are apparently attached to each other by scar tissue and form two distinct lumens; one large and one small. The lymph glands in the wall of the intestine are greatly enlarged. They show masses of epitheloid cells, hyaline degeneration and in some areas grouping suggesting tubercles although no giant cells could be found.

The lymphatic glands of the mesentery show hyperaemia, some fibrosis and hyaline degeneration. There is also extensive leukocytic infiltration.

FRENCH HOSPITAL.

A regular meeting of the French Hospital Staff was called to order Friday, February 27, 1931, by Dr. M. J. Lyons presiding. Those present were: Drs. G. C. Anderson, C. J. Brown, F. Gallo, W. H. Harris, F. Loria, M. J. Lyons, P. Graffagnino, S. C. Lyons, L. J. Menville, J. Palermo, I. L. Rolling, J. F. Sicomo, G. L. Smith, E. Socola, and W. R. Strange.

The reports of deaths and discharges for the month of January were read by the secretary. Dr. Graffagnino presented two cases; one of Carcinoma of Rectum and the other of Recurrent Epithelioma of Breast. He stated that the tumor in the latter case was growing so fast that hardly nothing would have helped. The cases were opened to discussion and Dr. Menville said that Dr. Bloodgood of Johns Hopkins is of the opinion that irradiation before the operation takes a valuable place in checking metastasis.

The scientific program for this meeting was a talk by Dr. W. H. Harris on the "Etiology of Cancer." Dr. Harris first traced the history of cancer from its earliest times to Hippocrates who described it as "indolent ulcer" and on through the ages to the present differentiation of tumor formation. The five theories on the causation of these growths are:

1. Ribbert's theory that epithelial cells are cut off by conenctive tissue growth and grow at random.
2. Chronic inflammatory lesions are the responsible factor.
3. The latent cell theory, that is, at time of birth there are incorporated body cells that have the potentiality of taking on cancerous formation.
4. Heredity.
5. Infection or parasitic invasion.

Dr. Harris concluded with the statement that the general opinion of the causation of cancer that prevails relegates itself back to one basic factor—the misplacement of cells.

Another feature of the evening was a moving picture of the removal of tonsils with electrocoagulation, presented by Mr. Harvey of the G. E. X-ray Corporation. This method is particularly useful for tonsils that are inoperable because of the physical constitution of the patient.

There being no further business the meeting adjourned.

CULBERT J. BROWN, M. D.

MISSISSIPPI STATE HOSPITAL, FONDREN.

Staff Meeting, February, 1931.

Abstract.—Diabetes Mellitus Associated with Morphinism.—Dr. R. B. Zeller.

Case Report.—White, male, age 60, widower.

Family History.—Has no bearing on case.

Personal History.—Usual diseases of childhood. Influenza at the age of 48. Never used alcoholic beverages extensively. Began using morphine at the age of 56 following excessive worry. Admitted to the Mississippi State Hospital August 22, 1930, under the influence of morphine. Examination revealed extension of cardiac dullness to the left anterior axillary line. Heart sounds somewhat indistinct, but no murmurs. Blood pressure 143/90.

Laboratory: Stool examination negative for parasites; urinalysis—rare hyaline casts, no albumin; specific gravity, 1.028, acid reaction; blood Wassermann negative.

On Sept. 24 had received no narcotics of any kind for a period of 25 days. He had failed to

show the usual improvement following withdrawal of the drug. Patient complains of angina-like pains about the heart, dizziness and frequency of micturition. On re-examination at this time, blood pressure 192/98. Urinalysis—No casts, specific gravity 1.032, sugar 4-plus. Blood—Urea nitrogen 11.2 mgms. and sugar 300 mgms. per 100 cc.

Patient was now given insulin up to 60 units daily without any perceptible effect either on the blood sugar or patient's symptoms. Urinalysis still showed sugar 4-plus.

On Oct. 8, the patient was given one-quarter grain morphine in the morning and the same amount in the afternoon, and subsequently one-half grain daily.

The patient began improving clinically. He was granted leave Oct. 25, at which time the urine was free of sugar, the blood sugar had dropped to 165 mgm per 100 cc. and the blood pressure was 162/96.

Treatment.—The insulin was given in divided doses twice a day. Patient's diet was restricted as to carbohydrates as far as possible.

Comment.—No conclusions, of course, can be drawn from a single case but it is interesting to note that no improvement at all occurred in the patient even with 60 units of insulin daily until he was given a small amount of morphine each day. Also with morphine the same amount of insulin did benefit the patient.

The patient had shown no symptoms at all of diabetes until the morphine to which he was accustomed was withdrawn.

This might suggest that the continued use of morphine interferes with carbohydrate metabolism in some cases to such an extent that when once established the system requires the continued use of the drug to maintain the equilibrium.

VICKSBURG HOSPITAL.

Staff Meeting, February 12, 1931.

Abstract.—Headaches Due to Eye Strain.—Dr. Edley H. Jones.

The essayist remarked that probably headaches were the most frequent symptom that patients complained of and stated in his opinion that eye strain was second in the order of frequency of cause, constipation unquestionably being the most frequent cause.

The essayist remarked that there were three different types of eye strain with combinations of them, discussing symptoms and severity.

He reviewed the typical symptoms of eye strain with which all are familiar and which are easily diagnosed. He stated it was atypical cases that were difficult to diagnose and which frequently the general physician saw first. After discussing the various symptoms, he reported the following cases, demonstrating certain atypical types.

Case No. 1.—Dr. P., white, male, married, age 32, surgeon, presented himself Nov. 29, 1930, complaining of eyes burning and being uncomfortable. He had worn the same glasses for some five years and thought they needed changing. Examination revealed that his correction did not need to be changed, but on going over his environment it was found that he was subjected to a good deal of glare. A Cruxite lens eliminating glare was prescribed, using the same correction, which eliminated the glare and relieved the patient.

Case No. 2.—Mrs. P., white, female, age 20, housewife, consulted her family doctor, complaining of headaches. A general physical examination revealed nothing other than constipation. He prescribed for this, but referred her for examination of the eyes. Eye, ear, nose and throat examinations revealed that she not only had a hyperopic astigmatism, but that she also had a mild catarrhal ethmoiditis. Experience has shown that it is best to clear up these mild ethmoid conditions before prescribing glasses; the results are more satisfactory. Accordingly she was treated for about two weeks and glasses were prescribed, Nov. 10, 1930. She had prompt relief from her symptoms.

Case No. 3.—Mr. L. White, male, married, age 32, motion picture operator. On Sept. 14, 1930, he consulted his family physician, complaining of attacks of vertigo. A general physical examination was negative and he was referred for examination. He was found to have a hyperopic astigmatism which, when corrected, relieved him of his attacks of dizziness.

Case No. 4.—Mrs. McD. This patient had been seen previously with a bilateral chronic purulent maxillary sinusitis, which had been operated upon. She got along very nicely for about a year when she consulted her family physician, complaining of nervousness and headaches. He found her to have an adenomatous goiter, which he operated upon. After the operation she continued to have some headaches, though not as severe as previously. She had worn glasses all of her life and she was referred to have her eyes examined. Examination revealed a myopic astigmatism, which her glasses did not entirely correct. She was refacted, the correct correction prescribed April 19, 1930, and since that time she has had no further trouble.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL.

Staff Meeting, March 9, 1931.

Abstract.—Cyst of Mesentery with Gonococcus Present in the Aspirated Fluid and Associated with Acute Appendicitis.—Dr. J. A. K. Birchett, Jr.

Patient.—Colored, female, age 30, married, no children, no miscarriages. Admitted to hospital February 21, 1931.

Chief Complaint.—Pain in abdomen, of sudden onset, with fever.

History of Chief Complaint.—After eating supper four nights ago went to bed feeling nauseated. After sleeping for several hours was awakened by severe pain in the upper abdomen and vomiting. Family physician was called and gave her hypodermic and told her that she had acute indigestion. Hypodermic gave no relief. Next morning pain was again felt but was general over the abdomen and all nourishment taken was promptly vomited. Temperature as high as 103°F.

The next day doctor again saw her and advised her to go to a hospital for operation as he thought the condition at the second observation was acute appendicitis. She did not take his advice at once but waited until the next day when her condition became more aggravated.

Past History.—Influenza; malaria; several attacks of tonsilitis; no pregnancies. Negative respiratory history; negative digestive history. Negative circulatory history. Menstrual history gave some evidence of dysmenorrhea and metorrhagia at times. Genito Urinary—some leucorrhea for past three or four years; no urinary symptoms.

Family History.—No tuberculosis; no cancer; father well; mother well; two brothers well; two sisters well.

Physical Examination.—Fat, well developed negro female walked into clinic. Temperature 101°F.; pulse 130; respiration 18. Few rales in right base with cough but x-ray gave negative findings. Heart very rapid, regular, weak; no murmurs. Abdomen—fat, distended, tympanitic, tender over all quadrants, but most marked over right lower quadrant. Pelvic—complained of pain but no masses made out. Some leucorrheal discharge. Cervix negative except for mucoid discharge. Smears did not show gonococci.

The blood count was markedly elevated,—29,900 total leukocytes, with 82 per cent neutrophiles, twenty of which were immature forms. The urine showed pus cells and evidence of acute nephritis, ie, fresh blood, hyaline and granular casts. Wassermann, Kahn, and Kline and Young tests on blood negative.

A diagnosis of acute appendicitis with general peritonitis was made with the possibility of an acute pyosalpinx in mind.

Procedure.—After administration of 1,000 cc. of 5 per cent glucose in the vein, patient was sent to surgery where under spinal anaesthesia a right rectus incision was made to facilitate ample exploration. The peritoneum was deeply congested and contained free fluid. The transverse and ascending colon were purplish as if there might be mesenteric torsion with obstruction of venous return. A large cystic mass about the size of a five month's pregnancy and of same consistancy as a pregnant uterus covered the whole lower abdomen and pelvic area. A cystic mass at the normal location of the cecum and which was at first taken for a congested cecum, proved to be a cyst which after aspiration allowed the cecum to be observed and the appendix located. After the smaller cyst was aspirated and specimen for examination taken the larger cyst which was in the mesentery of the small intestine was aspirated and a half gallon of straw colored fluid was withdrawn. Some loops of small intestine were closely attached to the cystic mass due to its formation in the subserous position. After the collapse of the mass, all viscera were readily accessable to exploration. Left tube and ovary were a cystic mass. The uterus was small. The right tube showed chronic inflammatory, was rather thick, and adherent to the pelvic peritoneum.

The gallbladder and stomach were negative. The appendix was of the high retrocecal type with two-thirds of its distal portion extraperitoneal along the body of the psoas muscle. It was removed with some difficulty, due to the short high mesentery, necessitating several ligatures. There was evidence of acute inflammatory but no gangrene and it was not the chief cause of the extensive peritoneal reaction. It probably was the activating cause of a flare up of the acute abdomen. The cysts in the mesentery were closed, not trying to do a tedious dissection in the face of so much peritoneal irritation. The abdomen was closed without drainage and patient made an uneventful recovery.

An interesting fact in this case was that the fluid removed from the cyst and apparently clear, contained pus cells and an organism which was gram negative and occurred intracellularly, consistent in appearance with the gonococcus. This organism very probably has lain dormant in the cystic formation since some previous peritoneal infection although patient did not give any his-

tory of a previous serious illness such as pelvic peritonitis.

Abstract. — Meningococcic Meningitis with Autopsy Findings.—Dr. G. C. Jarratt.

Patient.—White, male, infant, 14 months old. Admitted to hospital on January 26 at 6 P. M.

Chief Complaint.—Fever, nausea and vomiting.

Present Illness.—Mother stated that child was convalescent from recent illness, and had begun to take nourishment and play, with no fever for past four days. About noon of day of admission, fever was 104°F., and patient began to vomit everything taken. Vomiting had continued up to the time of admission. Fever, however, had dropped to 99° F. at 4 P. M.

Past History.—No illness of any consequence up to the last of December, 1930. Child was admitted to this hospital on Jan. 10, 1931, with a history of pneumonia beginning 15 days previously. Had recovered from pneumonia, but temperature remained up and two days prior to this admission began crying with earache, bilateral. Bilateral otitis media was found on admission and both drums were incised with profuse drainage of pus for several days. The right ear cleared up but left continued to drain and temperature remained normal and child returned home with instructions as to treatment of draining ear. Child seen four days later and the ear was still draining slightly. Temperature had remained normal and the child was taking nourishment and playful. Two days later patient returned with the present illness.

Family History.—Father and mother living and well; one brother living and well; no tuberculosis; no miscarriages.

Examination.—A well developed but poorly nourished and dehydrated child, very acutely ill. Child very restless and tossing head about and has a very anxious look. Anterior and posterior fontanelles closed. Both pupils markedly dilated but equal and react to light. Nose, not remarkable. Ears—right drum normal; left drum has opening and canal filled with pus. Mastoids—No redness, swelling, or edema, or apparent pain over either side. Cervical glands on left side of neck enlarged to the size of peanut kernels, hard, freely movable, and not painful. Marked stiffness of neck but no opisthotonus. Lungs and heart, not remarkable. Abdomen, extremities, and genitalia, not remarkable. Skin shows no purpuric spots or petechiae; dry, and tissue tugor very poor.

Central Nervous System.—Kernig's negative; ankle clonus negative; Babinski negative; Brudzinski negative; neck rigid; no opisthotonus; no twitchings or convulsions.

Course and Treatment.—Jan. 26. Spinal puncture done and 20 c. c. cloudy turbid fluid withdrawn under increased pressure. Cell count, 4,095; polymorphonuclears, 82 per cent, lymphocytes, 18 per cent. Stained smears revealed many pus cells and gram negative intra- and extracellular diplococci. Culture was negative. Fifteen cc. of Lederle's antimeningococcic serum was given intraspinally and 10 c. c. of Lilly's concentrated antimeningococcic serum and 15 c. c. of Lederle's antimeningococcic serum were given intravenously; 200 cc. of 5 per cent glucose solution given by clysis.

Blood—Hemoglobin, 87 per cent; erythrocytes, 5,024,000; leukocytes, 21,500; differential leukocyte count, polymorph. neutrophiles 93 per cent lymphocytes 7 per cent; no malaria.

Urine.—Albumin, trace; no sugar; no acetone; no casts; no pus or red cells in sediment.

Jan. 27, 9 A. M.—Very little improvement in condition. Spinal puncture done and 20 c. c. of cloudy fluid under increased pressure obtained. Administered 15 c. c. of Mulford's serum intraspinally; 10 c. c. of Lilly's concentrated serum and 15 c. c. of Mulford's antimeningococcic serum intravenously. 4 P. M.—Administered 200 c. c. of whole citrated blood intravenously. 5:30 P. M.—Spinal puncture done and 20 c. c. of cloudy fluid obtained. Administered 15 c. c. of Mulford's antimeningococcic serum intraspinally; 15 c. c. of Mulford's serum and 10 c. c. of Lilly's concentrated serum intravenously.

Jan. 28, 9:30 A. M.—General condition improved. Spinal puncture done and 20 c. c. of cloudy fluid obtained under very little pressure. Administered 15 c. c. of Lederle's antimeningococci serum intraspinally; 15 c. c. of Lederle's serum and 10 c. c. of Lilly's concentrated serum intravenously. 6 P. M.—Taking nourishment and looks improved. Spinal puncture done and 20 c. c. of blood tinged fluid under very little pressure obtained. Administered 15 c. c. of Mulford's antimeningococcic serum intraspinally and 10 c. c. of Lilly's concentrated serum introvenously. Spinal fluid—Cell count, 3,822; polymorphs 70 per cent, lymphocytes, 30 per cent; smear and culture negative for organisms.

Jan. 29.—Condition improved; left ear draining; taking nourishment. Spinal puncture done and 18 c. c. of cloudy fluid under very little pressure btained. Administered 15 c. c. of Mulford's antimeningococcic serum intraspinally and 10 c. c. of Lilly's concentrated serum intravenously. Spinal fluid—Cell count, 3,058; poly-

morphs, 88 per cent, lymphocytes 12 per cent. Smear showed numerous pus cells with few intra- and extracellular gram negative diplococci; culture negative.

Jan. 30.—General condition good but vomiting occasionally. Spinal puncture done and 12 c. c. of slightly cloudy fluid under no increased pressure obtained. Administered 10 c. c. of Lederle's antimeningococcic serum intraspinally and 10 c. c. of Lilly's concentrated serum intravenously. Spinal fluid—Cell count, 3,465; polymorphs, 69 per cent, lymphocytes, 31 per cent, smear and cultures negative.

Jan. 31, 10 A. M.—Left ear still draining; no tenderness, redness or edema over mastoids. Stiffness of neck much less; no vomiting; taking nourishment. Spinal puncture done and 8 c. c. of slightly cloudy fluid obtained. Administered 5 c. c. of Lilly's concentrated serum intraspinally and 15 c. c. of Lederle's serum intravenously. 6 P. M.—Child had vomited most of nouishment taken during the day, but otherwise seems in fair condition. Spinal puncture done and 20 c. c. of slightly cloudy fluid obtained, but no serum given. Spinal fluid: Cell count, 4,301; polymorphs, 70 per cent; lymphocytes, 30 per cent. Smears and cultures negative for organisms.

Feb. 1, 10 A. M.—Spinal puncture done and 20 c. c. of slightly cloudy fluid withdrawn. Administered 15 c. c. of Mulford's serum intraspinally. Spinal fluid: Cell count, 4,928; polymorphs, 73 per cent; lymphocytes, 27 per cent. Smears and cultures negative.

Feb. 2.—Child has marked urticaria, distributed in large areas over body. Spinal puncture done and 15 c. c. of cloudy fluid under no pressure obtained. Administered 10 c. c. of Lilly's concentrated serum intraspinally. Spinal fluid: Cell count, 3,584; polymorphs, 70 per cent; lymphocytes, 30 per cent. Cultures and smears negative for organisms.

Feb. 3.—Urticaria much less. Spinal puncture done and 15 c. c. of only slightly cloudy fluid under no pressure obtained. No serum given. Spinal fluid: Cell count, 875; polymorphs, 68 per cent; lymphocytes, 32 per cent. Smears and cultures negative for organisms.

Feb. 4.—General condition greatly improved; playing with toys and taking nourishment; urticaria gone. Spinal puncture done and 8 c. c. of fluid obtained; no serum given.

Feb. 5, 9 A. M.—Child vomited most of feedings during night. Given 200 c. c. of 5 per cent glucose by clysis. Spinal puncture done and 8 c. c. of xanthrochromic fluid obtained; no serum given. Spinal fluid: Cell count, 157; polymorphs, 65 per cent; lymphocytes, 35 per cent. 6 P. M.: Child doesn't seem to notice objects and can flash objects before eyes with no reflex; no reaction to light. No mastoid redness, swelling or apparent pain.

Feb. 6.—Spinal puncture done and 12 c. c. of clear fluid under no increased pressure obtained. Eyes examined by opthalmologist who writes, "papillary edema of both fields, most marked in left; no choked disc or optic atrophy."

Feb. 8, 9 A. M.—Child still has no evidence of sight in either eye. Refuses nourishment and there is a slow sighing respiration with periods of apnea due to increased intracranial pressure. 6 P. M.: 8 ounces of milk given by gavage; child in critical condition.

Feb. 9, 1:45 A. M.—Child expired.

Autopsy Findings.—Cranial contents only examined. The dura was thickened and bound down to brain substance with dense adhesions; separated with difficulty. No exudate over brain substance. The convolutions were less marked than normal and upon lifting the brain the right lateral ventricle ruptured with escape of a large amount of clear spinal fluid. There were adhesions over the base of the brain and at the optic commissure there was a cyst about the size of the end of the thumb, filled with clear fluid, (thus accounting for the sudden blindness). No definite obstruction could be found around the medulla or below. There was no exudate at the base of the brain. Microscopic examinations showed chronic inflammatory of meninges at adherent areas; no acute inflammatory. Left mastoid shows thick gray mucoid purulent exudate but with no destruction of bone internally or toward the surface. Cultures from mastoid showed streptococci and staphylococci.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL.

Staff Meeting, March 9, 1931.

Abstract.—A Brief Discussion of Asthma from the Allergic Viewpoint; Report of an Interesting Case.—Dr. E. H. Jones.

Patient.—Mr. A. K., white, male, married, age 35, sawmill man.

Complain.—(1) Asthma; (2) hayfever.

Family History.—Entirely negative. This is of particular note as a very high percentage of asthmatics have a positive family history.

Past History.—Usual diseases of childhood. At the age of 15 had a very severe attack of bronchitis. Following it he had asthma. Since that time he has never been free of asthma for any great length of time. A few years ago he began having hay fever. He first noticed his nose stopping up with some sneezing. Now his hay fever is of the perennial type, though it seems aggravated in the spring and more so in the fall. The left side of his nose is blocked up practically always and the right side frequently. His asthmatic attacks are becoming more frequent. He has them as often as every day for a week. Frequently has as many as five attacks during a week. They are beginning to interfere with his work and he has in the past four months lost weight from 172 to 145 lbs. He has had no operations.

Procedure.—He has been tested cutaneously and intradermally with all of the pollens that cause trouble in this locality as well as the animal epithelial and miscellaneous inhalant groups; also both cutaneously and intradermally with foods. There were 228 cutaneous tests and 93 intradermal tests made.

Result of Testing.—On cutaneous testing he had a doubtful reaction to giant ragweed and one-plus reactions to Johnson grass and Bermuda grass. In the miscellaneous group he had a doubtful reaction to silk, chamois skin, pyrethrum, flaxseed, kapoc, house dust and one-plus reactions to Hudson seal, dog hair, cat hair, rabbit hair, horse dander, human hair, rat hair, chicken feathers, hemp, primrose, jute, fir, orris root, binding twine, cotton and white pine. On intradermal testing he was found to have a doubtful reaction to sweet gum, a one-plus reaction to elm and poplar; a doubful reaction to blue grass and Bermuda grass, a one-plus reaction to Johnson grass, orchard grass, tall red top and a two-plus reaction to red top and to giant and late ragweed; a doubtful reaction to chicken feathers, goose feather and sheep wool, a one-plus reaction to kapoc and cat hair, a two-plus reaction to duck feathers and dog hair, a three-plus reaction to cattle hair and horse dander and four-plus reaction to house dust.

On cutaneous testing to foods he had a doubtful reaction to beet, black pepper, black walnut, casaba, hickory nut, lemon, ling cod, mushroom, casein (cow's milk), oyster, paprika, parsley, pickerel, pumpkin, quince, raspberry, shrimp, smelt, sole, swiss, chard, water cress, yeast and a one-plus reaction to asparagus, cauliflower, cocoanut, duck, green pepper, ground cherry, lettuce, lime, mace, albumen (cow's milk), mustard, milk (goat), mutton, nutmeg, oat, okra, pea, peach, peanut, pecan, pike, pimento, pineapple, redsnapper, sardine and tapioca.

On intradermal testing with foods, he had a doubtful reaction to albumin (cow's milk), orange, pea, pear, pineapple, pork, tea, and wax bean, a one-plus reaction to cocoa, lamb, casein (cow's milk), cow's milk, navy bean, peanut, and sweet potato, a two-plus reaction to beet, cabbage, celery, cheese, egg plant, egg white, lettuce, strawberry and a three-plus reaction to asparagus, buckwheat, carrot, egg and spinach.

His tests were concluded on October 31, 1930 and he was given instructions on November 3. Because of the lateness of the season, no pollen extract was advised. He was advised to eliminate contact with feathers, animal hair and the other miscellaneous antigens to which he had reactions. He was also advised to eliminate those foods to which he reacted, most particularly milk and eggs. General hygenic rules were advised. He was given 30 minims of dilute hydrochloric acid (U.S.P.) four times daily for the first three weeks and requested to report at the end of that time.

On December 1, he telephoned to state that he had had only one attack during the three weeks and that was a light one. He was unable to state positively any reason for that attack.

Feb. 27, 1931.—Patient states that since he reported on Dec. 1, he has not had a single attack of asthma. He states he may have had some slight trouble, but it was so little that it did not bother him and he has been able to do his work and follow his usual method of life. His only worry now is that he has not picked up any weight, but he feels so good over not being constantly bothered with asthma that he does not care very much.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR.

April 3.—Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

April 3.—Physiology Seminar, Tulane Medical School, 5 P. M.

April 6.—Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

April 8.—Touro Infirmary Staff, 8 P. M.

April 10.—Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

April 10.—Physiology Seminar, Tulane Medical School, 5 P. M.

April 10.—French Hospital Staff, 8 P. M.

April 13.—House of Delegates meeting, Louisiana State Medical Societf, 10 A. M.

April 14.—First day, Scientific session, Louisiana State Medical Society meeting.

April 15.—Second day, Scientific Session, Louisiana State Medical Society meeting.

Apirl 16.—Third day, Scientific Session, Louisiana State Medical Society meeting.

April 16.—New Orleans Hospital Council.

April 17.—Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

April 17.—Physiology Seminar, Tulane Medical School, 5 P. M.

April 17.—Mercy Hospital Staff, 8 P. M.

April 20.—Hotel Dieu Staff, 8 P. M.

April 21.—I. C. R. R. Hospital Staff, 12 Noon.

April 21.—Baptist Hospital Staff, 8 P. M.

April 21.—Charity Hospital Medical Section, 8 P. M.

April 24.—Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

April 24.—Physiology Seminar, Tulane Medical School, 5 P. M.

April 27.—ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

During the month of March besides the regular meeting of the Board of Directors the Society held two scientific meetings. Papers were presented by Drs. Erasmus D. Fenner, E. Denegre Martin, W. A. Reed, A. C. King, Chaillé Jamison and W. H. Robin.

These meetings were very well attended.

Dr. Olin West, Secretary, and Mr. Will Braun, Business Manager of the American Medical Association, visited New Orleans to make an inspection of the facilities the city offered in the event the American Medical Association should accept the invitation of the Orleans Parish and Louisiana State Medical Societies to meet in New Orleans in 1932. A luncheon was given at the Jung Hotel for these guests.

The Committee on Arrangements for the coming meeting of the Louisiana State Medical Society has completed the program for entertaining the members and guests.

Most of the commercial exhibits have been sold, and it is certain that they will all be disposed of before the meeting.

Dr. F. M. Johns and his committees have been very active and the meeting should be a success.

The membership was invited to see a moving picture of medicine, medical education and medical research in Porto Rico at the Hutchinson Memorial on Thursday, March 26. This picture was shown under the auspices of Tulane University School of Medicine.

The second quarterly insurance premium will be due April 5. Please send in your check at once in order that the Society's check may be sent to the home office in Galveston on the due date.

TREASURER'S REPORT.

Actual Book Balance 1/31/31	$1,333.62
Credits	2,024.42
	$3,358.04
Expenditures	1,960.00
Actual Book Balance 2/28/31	$1,398.04

LIBRARIAN'S REPORT.

Seventy-three books have been added to the Library during February. Of these 15 were received by purchases, 1 by binding, 42 by gift and 15 from the New Orleans Medical and Surgical Journal. New titles of recent date are listed below.

Arrangements are being formulated for the entertainment of the Medical Library Association in New Orleans, May 19-21. An interesting program is being planned. It is hoped that the first southern meeting of the Association will be most successful. Our library and the library of the Medical School are joint hosts.

NEW BOOKS.

Borradaile—Elementary zoology. 1930.

Pitfield—Compend of Bacteriology. 1930.

Mendenhall—Tobacco. 1930.

Wisner—Public Welfare Administration in Louisiana. 1930.

Nicholson—Laboratory Medicine. 1930.

Carrie—Le Diabete Sucre. 1930.

Wyatt—Chronic Arthritis and Rheumatoid Affections. 1930.

Coakley—Manual of Diseases of the Nose and Throat. 1930.

Whitman—Orthopedic Surgery. 1930.

Faber—Nosography. 1930.

Stieglitz—Arterial Hypertension. 1930.

Farr—Practical Local Anesthesia. 1930.

Harrop—Diet in Disease. 1930.

Rackemann—Clinical Allergy. 1930.

Robinson—70 Birth Control Clinics. 1930.

H. Theodore Simon, M. D.,
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

COME TO THE ANNUAL MEETING ! ! OH ! YES.

Wa'l Jean Batise, I see 'dem convantion gon' be in N'Aw'leens. Lafou'che, Ter'bon, Caddo, 'Takapa, Bossier, all 'dem parish, gon' sen' doctors to N'Aw'leens, fine out sicknesses.

Ain't we got sick' nouf already, me, I ax you?

Long taim ago all we got's chill an' fever, dy'ree and babies. Now, I ax you how many we got?

Ev'ry taim dem doctors go convantion dey bring back new sickness. Dey bring back malaria, das chill an fever; dey bring back Tuberclose, das consumption; dey bring back Bright's disease, you know wat's das? 'Das sickness wat too bright for doctors.

'Den 'dey bring 'pendicites las' taim 'dey bring tool'reamer. Wa'l, I ax you, Jean, Batise, 'das no nam' fo' sickness, 'das plumber tools.

DR. H. B. GESSNER, President, Louisiana State Medical Society.

'Dem new doctors, not lak' ole taim. No mo' beard, no mo' long coat, no mo' hoss' an' buggy; looks lak' 'de mo' beard 'dey take off and 'de mo' short 'dey coat, 'de mo' sickness 'dey mak'.

Me, I say, gimme back 'de beard, an' you kin' have 'de tool'reamer.

No, no convantion fo' me. Me, I lak' quinine, calomel an' sassifras.

Lemme tell you somet'ing else. You t'ank 'de doctor, he know how to bleed you today? Me, I ax' you.

How he bleed you now? He stick lil' needle in your arm, take two drops blood. How he gon' do not'ing wid' 'dat? Me I ax' you? Me, I don' lak' 'dat.

'Dey go 'dere read papers. Wa'l, me, I stay home read catalogue. Yah, Sears Roebuck. 'Den me, I don' mak' no new disease.

Now, you lissen me, Jean Batise. Ole taim, befo' convantion, God make you sick. Come convantion, germs make you sick. Wa'l me, I don' see 'em, so 'den 'den say, "Moustique," give malaria. Wa'l, das bigger.

'Den dey say rats make you sick, an' pollies, an' rabbits,—rabbits, 'das tool'reamer, an' now w'at you t'ink? 'Dey blame sickness on 'de cow. Yeh, cow sickness, on-de-lan fever. Jean Batise, me, I ax' you. On-de-lan fever!

Jean Batise, you know 'de only t'ing 'de cow gits on re lan's ticks. An' if you don't scratch tik off you, 's you fault. You don' need medicine. You don' have go convantion to know 'dat.

So, Jean Batise, did year again, I no go convantion. Me, I don' lak' 'dat.

Jean Batise, I wan' ax' you favor. W'en you go N'Aw'leens, bring me back, one lil' badge, w'a say L. S. M. S. an' put ma nam' on it.

No, I no go convantion; yeh, das w'at I tell you.

W'at you say? You got letter from Mansieur Doctor Talbot, wat' meb'be gon' mak' me a chairman? 'Das w'at you say? Ha! Ha! All taim I fool you, me. 'Cose I gon' convantion.

I gon' telefoam Jung Hotel, keeps me one nice room.

Yeh, Jung Hotel 'das convantion headquarters. I gon' tell 'em, I chairman.

En' Jean Batise, 'member I'm chairman, w'en you see me at convantion, I gon' give you good chair, and if you bring Rosalie, I gon' give her good chair too, me Pierre Aristide Grosbec, Chairman.

H. E. BERNADAS, M. D., Chairman,
Committee on Publicity.

THE CHRONIC NON-ATTENDANT.

Our medical non-attendant is one who pours the flattering unction to his soul that he is too busy to attend our meetings. Excuse, flimsy and perforable as spider's web. This individual is, however, so impressed with the importance of following the general trend of organized medicine that he is in the ranks. He feels that this membership confers a certain honor and respectability. But he forgets his obligations, and paying dues only is not living up to the full requirements of

his membership. He is surely the poorer scientifically, socially, and fraternally for constant non-attendance. He is usually a big man in his community. Fully equipped in medical knowledge, but he lives, as it were, on the harvest sown by the "convention men," who contribute papers and discussions. These form the living matter of current progressive medical literature on which he feeds his mind. This is the group you staunch, enthusiastic, loyal "conventionalists" must grapple with hoops of steel and help bring to the New Orleans meeting. They need the stimulus, the inspiration, and social contacts of such meetings. Even when not reading a paper or taking up the cudgel in discussion, he owes us his presence. His attendance means encouragement to those who bear loyally and constantly the brunt of this great work. Once properly inoculated with the convention spirit, he is almost certain to return to other meetings and himself become active in this transcendent mission of organized medicine. No meetings of societies, no up-to-the-minute scientific contributions, a dearth, therefore, of material for our journals, and then follows inertia, mental stasis. Impress this "non-attendant" along these lines of thought, perhaps adding your own better arguments and personal appeals. Swell our attendance with just such a group who are to be found not only in country districts, but, we say it with regret, are practicing even in our larger centers. You who read this appeal, written in somewhat critical, but unkindly spirit, let our slogan be "We will individually promise the delivery of at least one CHRONIC NON-ATTENDANT at the New Orleans meeting in April."

HOMER DUPUY, M. D.,
Member of the Publicity Committee.

WHY COME.

In the last issue of the Journal, the Chairman of the Publicity Committee, Dr. H. E. Bernadas, suggested as a slogan "Come to the Annual Meeting."

As the meeting time approaches, it might be well for every member of the Society to place a note on his desk—"Go to the Annual Meeting" in New Orleans, April 13.

This is one time that the 13th will be a lucky day, lucky because you will have the opportunity to see many changes. The old landmark (The Old Hutchinson Memorial) on Canal street, where we gathered for so many years, is deserted, yet many who will gather in New Orleans for the meeting will visit with their friends the site of the "trials and tribulations" of their college days. The deserted building may make you feel like the great poet, Tom Moore, that you "tread alone some banquet hall deserted," even so you may experience the same feeling that this same poet experienced, "that fond mem'rys will bring the light of other days about you." If there is an error in my quotation, my apologies are offered to the poet.

The opportunity to visit the familiar haunts of our college days, the opportunity to meet with our old friends and reminisce for a while, will more than repay onyone for the time spent; but that will not be all, you will have the opportunity to inspect the New Hutchison Memorial Building, dedicated to Medical Education. The many improvement, which you will notice, will be an added incentive to you to keep up with your scientific study so that the younger men, to be graduated in the near future, will not too readily replace us.

You will note the additions and improvements at Charity Hospital. I am sure that the pride that every doctor has in that great State Institution will be amply repaid by a visit to the clinics which are fed from all over the State.

The other hospitals in town will welcome you, and will be glad to have you visit their clinics.

Louisiana has just cause to be proud that New Orleans is one of the great medical centers of our country.

Come to the meeting and join with us of the profession in New Orleans so that the meeting of 1931 will be one long to be remembered. Of course, one can find excuses for not attending the meeting such as the depression and poor collections, and similar reasons. Each excuse is as good as the other. If work is slack that is a very good excuse for getting away for a little rest; at any rate, use that if you have no other excuse.

We sincerely hope that you will give evidence of your appreciation of the many activities of the committee by your presence at the meeting. Come and renew old acquaintances and carry back with you, not only the memory of a few days of real pleasure, but some real medical profit.

ISIDORE COHN, M. D.,
Member of the Committee on Publicity.

THE MEDICAL SCHOOL OF THE LOUISIANA STATE UNIVERSITY.

Plans for the New Medical School are progressing satisfactorily, and the organization of the faculty is proceeding remarkably quickly. Governor Long has announced an Advisory Board to consist of Dr. James Nix of New Orleans, Dr. Arthur Herold of Shreveport, and Dr. D. C. Iles of Lake Charles. The full staff of the Medical School has not yet been announced, but some of the department heads have been nominated. These men represent some of the outstanding specialists

in the City of New Orleans, and include Dr. Homer J. Dupuy, Jr., Professor of Otolarynology; Dr. Amedee Granger, Radiology; Dr. P. J. Kahle, Professor of Urology; Dr. P. J. Carter, Professor of Obstetrics; Dr. Henry Blum, Professor of Ophthalmology, and D. Joseph N. Roussell, Professor of Dermatology. Dr. Clive Brooks has been named Professor of Physiology and Pharmacology, a position which he now occupies in the Medical School of the University of Alabama.

Construction work for the New School Building has already commenced. It will be built back of the Delgado and Milliken Buildings, with the main entrance between these two buildings. The details of the construction of the building have not as yet been announced, but it is understood that it is to be nine stories high, and will contain an auditorium seating between five hundred and one thousand, together with the necessary class rooms, seminar rooms and laboratories for the purpose of conducting the teaching of the students.

NEWS ITEMS.

The following members of the faculty of the Graduate School of Medicine of the Tulane University of Louisiana attended the meeting of the American College of Physicians at Baltimore, Md., March 23 to March 27, 1931:

Professor Allan C. Eustic presented a paper on "The Response of the Cardio-vascular System to Respiratory Strain. A Measure of Myocardial Efficiency."

Prof. H. Daspit.

Prof. Elizabeth Bass.

Prof. O. W. Bethea read a paper before the meeting of the Tri-State Medical Society held at Shreveport, La., held Friday, March 20, 1931, on "Mensuration in the Diagnosis of the Diseases of the Chest."

Prof. E. Denegre Martin addressed a meeting of the Surgeons of the Gulf, Mobile & Northern Railroad Co., at Mobile, Ala., March 28, 1931, on "Fractures of the Patella."

SOUTHERN BAPTIST HOSPITAL.

The regular monthly meeting of the Clinical Staff was held Tuesday, March 17, at 8:00 p. m. Dr. Rena Crawford presented a case report of Congenital Lymphangiectatic Edema. This was followed by a discussion of Intestinal Influenza by Dr. J. E. Bailey, which was discussed by Drs. Crawford and Williamson.

During the past month there were 433 patients discharged from the hospital and 18 deaths. Six of the patients who died came to autopsy, a percentage of 33 per cent.

ST. TAMMANY PARISH MEDICAL SOCIETY.

St. Tammany Parish Medical Society met with the following members present: Drs. F. F. Young, Sr., Lawrence and Roland Young, R. B. Paine, H. D. Bulloch, F. R. Singleton and J. F. Polk. There was also present as guests of the Society: Drs. T. B. Sellers, Shirley Lyons, Gilbert Anderson and Emmett Irwin of New Orleans. Our President, Dr. J. K. Griffith, being absent, Dr. Lawrence Young, Vice-President, acted and called for reading of minutes of last meeting, which were adopted as read. By invitation, Drs. Anderson and Lyons were prepared to furnish the meeting with essays. Dr. Anderson gave a very masterly lecture, accompanied by slides, on Cranial Injuries, dealing minutely with classification symptoms and treatment. A general discussion followed, and all voiced their appreciation of the lecture and especially his remarks in closing on the general management of these cases as they present themselves at our office. We hope the doctor will be with us often. Due to the lateness of the hour, Dr. Lyons was asked to be with us at our next meeting for his message. Dr. Irwin was also asked to bring us a paper or message at the next meeting; both very kindly consented. As the Louisiana State Medical Society meets in New Orleans in April, it was moved and seconded that we do not meet in April. A motion was carried instructing the Secretary to furnish the State Secretary with a copy of our monthly meeting for publication in the State Journal. There being no further business the Society adjourned to meet in Covington, La., Southern Hotel, on Friday night, May 8, 1931, at 8:00 p. m.

J. F. POLK, M. D.,
Secretary.

ACADIA PARISH MEDICAL SOCIETY.

A meeting of the Acadia Parish Medical Society was held in Crowley, February 27. The minutes of the previous meeting were read. Dues were urged to be paid early as protection under the Medical Defense Act is covered only from the time the annual dues are received by the Secretary-Treasurer of the Louisiana State Medical Society.

It was moved and the motion passed unanimously that the annual parish dues be fixed at one dollar.

The following officers were elected for the coming year: President, Dr. J. P. Mauboules; Vice-President, Dr. E. S. Peterman; Secretary-

Treasurer, Dr. L. L. Kahn; Delegate, Dr. E. S. Peterman; Alternate Delegate, Dr. J. W. Faulk.

L. L. KAHN, M. D.,
Secretary.

INFECTIOUS DISEASES IN LOUISIANA.

For the week ending February 28, there were reported 151 cases of influenza, 57 of pneumonia, 52 of syphilis. These three diseases led all other reportable diseases. Thirty-three cases of smallpox were reported, 11 from the Parish of Tangipahoa, 4 from Sabine and 6 from Orleans. Diphtheria occurred in 15 parishes; Orleans led with 15 reportable cases. Seven cases were reported of undulant fever from Jefferson Davis Parish. The next week, ending March 7, influenza had fallen to 49 cases, pneumonia 52, syphilis 23, hookworm 31, and diptheria 30. During this week there were reported 23 cases of smallpox, 7 from Tangipahoa, 4 from Webster, 3 from Sabine, 3 from Orleans, and 2 from Caddo, with one each from Lafayette, LaSalle, Lincoln and Washington. The week ending March 14, 39 cases of influenza were reported, 40 of pneumonia, 58 of syphilis, 27 of diphtheria. Eleven cases of smallpox were reported from Orleans Parish, 6 from Caddo, 2 from Grant, 2 from Sabine, 2 from Morehouse and one each from Beauregard, Ouachita and Rapides.

WEEKLY HEALTH INDEX OF NEW ORLEANS.

During the week of February 21, the death rate in the City of New Orleans was 19.2, somewhat lower than the death rate for the whole year and slightly higher than the corresponding week last year. For the week ending February 28, there were 176 deaths, 98 among the white population, and 78 among the colored, giving a death rate of 19.6. The death rate in the corresponding week of 1930 was 18.6. For the week ending March 7, the death rate was lower than has been recorded in any previous week for many months. There were 124 deaths, 67 white and 57 colored, giving a rate of 13.8. Eight of these deaths were in children under one year of age. This marked decline in the death rate of this particular week reduced the rate for all of 1931 to 20.1, the same as last year at this time.

PARISH SOCIETY OFFICERS.

The following Parish and District Medical Societies have elected officers for 1931:

Acadia Parish: President, Dr. J. P. Mauboules, Rayne; Vice-President, Dr. E. S. Peterman, Crowley; Secretary-Treasurer, Dr. L. L. Kahn, Rayne; Delegate, Dr. E. S. Peterman, Crowley; Alternate, Dr. J. W. Faulk, Crowley.

Caddo Parish (Shreveport Medical Society): President, Dr. Pope W. Oden, Shreveport; First Vice-President, Dr. J. R. Stamper, Shreveport; Second Vice-President, Dr. O. A. Eaddy, Shreveport; Secretary, Dr. Wm. B. Heidorn, Shreveport; Treasurer, Dr. J. E. Knighton, Jr., Shreveport; Delegates, Drs. T. P. Lloyd, W. P. Butler, R. G. Douglas, W. S. Kerlin, G. A. Caldwell, J. M. Gorton, all of Shreveport.

Lafayette Parish: President, Dr. L. A. Prejean, Scott; Vice-President, Dr. R. S. Hernandez, Lafayette; Secretary-Treasurer, Dr. W. J. Yongue, Lafayette; Delegate, Dr. C. E. Hamilton, Lafayette; Alternate, Dr. R. D. Voorhies, Lafayette.

Third District: President, Dr. S. D. Yongue, Breaux Bridge; Vice-President, Dr. A. D. Voorhies; Secretary-Treasurer, Dr. L. B. Long, Lafayette; Delegate, Dr. Charles Horton, Franklin; Alternate, Dr. A. J. Comeaux, Youngsville.

Fourth District: President, Dr. W. B. Hunter, Coushatta; First Vice-President, Dr. O. C. Rigby, Shreveport; Second Vice-President, Dr. G. A. Caldwell, Shreveport; Secretary-Treasurer, Dr. W. B. Heidorn, Shreveport; Delegate, Dr. W. J. Norfleet, Shreveport.

Fifth District: President, Dr. A. D. Tisdale, Monroe; Vice-President, Dr. J. L. Smith, Dubach; Secretary-Treasurer, Dr. F. P. Rizzo, Monroe; Delegate, Dr. P. L. Perot, Monroe.

Seventh District: Secretary-Treasurer, Dr. W. C. Heinen, Lake Arthur; Delegate, Dr. Claude Martin, Welsh.

THE NATIONAL HEALTH COUNCIL.

The headquarters for this organization and nine of its constituent members will share office space on a co-operative basis, and will move to the new Nelson Tower Building, 7th Avenue, New York. The National Health Council and its member organizations include: American Child Health Association, American Heart Association, American Public Health Association, American Social Hygiene Association, National Committee for Mental Hygiene, National Organization for Public Health Nursing, National Society for the Prevention of Blindness, National Tuberculosis Association, Foundation for Positive Health.

ANNOUNCEMENTS OF FUTURE MEETINGS.

The 60th Annual Meeting of the American Public Health Association will be held in Montreal, Quebec, September 14-17, with the Windsor Hotel as headquarters.

The 3rd Congress of the Pan American Medical Association will be held in Mexico City, July 26-31. Information concerning this meeting may be obtained from Dr. Conrad Berens, 35 East 70th Street, New York.

PLEASE NOTE!

The New Orleans Medical and Surgical Journal and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely *free* to you.

The Cooperation Bureau is equipped with catalougues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in The Journal, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. The Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask The Journal about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn street, Chicago, Illinois.

We want The Journal to serve you.

CORRESPONDENCE.

New Orleans Medical and Surgical Journal,
1430 Tulane Ave.,
New Orleans, La.

Gentlemen:

A few weeks ago a young man about 5 feet, 7 inches tall, thin, slightly stooped and of dark complexion, came into my office purporting to be selling gowns, aprons, and other articles for physicians' use. He claimed to represent the Hoover Manufacturing Co., Room No. 4, Morehouse Bldg., Mobile, Ala. I gave him an order for 6 laboratory aprons, the price of which was $1.80, paid him $1.00 cash and was to pay the 80 cents when the aprons were shipped C. O. D. I was adviced that they would reach me in a few days.

Some days passed and I did not receive the goods. He had given me a duplicate order slip and I wrote to the Hoover Manufacturing Co. at the Mobile address and the letter was returned to me marked "Unclaimed. No such firm in the directory."

I noticed on the duplicate order slip that the headquarters of the Hoover Manufacturing Co. was at 30 West 33rd St., New York City, and under date of February 13, I wrote them the following letter:

"About January 27, your representative, Mr. R. Wharton, came in and took an order from us for 6 aprons, style 333, size 48, and he was given $1.00 as a down payment. He said that the aprons would probably reach us in four or five days. He left an order slip giving his address as Rm. No. 4, Morehouse Bldg., Mobile, Ala.

On February 5, I wrote to the company at Mobile inquiring for the goods as we had not received them. This morning the letter was returned marked 'Unclaimed' by the post office.

"I would like to know whether you have a representative by that name and if so why our order, which was given in good faith, has not been sent."

On February 18, I had a reply from the company in New York in which they stated the following:

"In reply to your recent letter, we have no representative by the name of R. Wharton, and if you have a duplicate order, kindly attach it to this letter and return to us at once, and we will try to make an adjustment." It was signed Chas. Baker, Hoover Manufacturing Company, Sales Manager.

I thought possibly if a write-up appeared in your columns it might save some other physicians the embarrassment and inconvenience of dealing with this individual who is going about swindling, and in all probability he would soon be caught in his attempt to represent a concern fraudulently.

Thanking you, I am,

Very truly yours,

W. A. Dearman, M. D.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

L. S. Lippincott, Editor

H. L. Rush, Associate Editor *D. W. Jones, Associate Editor*

FROM OUR PRESIDENT.

Scientific Sessions.

To the casual observer our Scientific Sessions run rather smoothly. Once in a while a superheated argument develops, but for the most part everything is said in good humor and taken in good faith, but there are two irregularities constantly creeping in that tend to disorder, and sometimes to ill-feeling. One of these is the abominable fault of a paper extending beyond the time limit; the other the extremely discourteous trick of an author, who is unable to attend the meeting, of sending in his paper to be read by someone else.

The law in the matter is entirely clear. "No address or paper before the Association, except those of the President and Orators, shall occupy more than fifteen minutes in its delivery." "Each paper must be read by its author." These two rules are very frequently over-ridden or disregarded, and invariably it is the fault of the man in the chair. It is really a remarkable thing, but it frequently happens, that a man will accept office and undertake to perform the duties thereof, and never go to the trouble to familiarize himself with the rules under which he is supposed to be operating. At least that is the impression one gets, and is certainly the kindest construction one can put on what happens.

Last May—one of these matters came up in the Section on Surgery. A member who was on the program, unable to be present, sent in his paper by a fellow townsman. When the time arrived for the paper, the chairman announced that the author had been prevented from coming and that his paper would be read by the gentleman by whom he had sent it. No one cared to appear ungracious, so the paper was read and discussed, and it messed things up very badly, because it was coupled with another paper for discussion, the two were considered jointly, and since the paper by the absentee author could not be published—By-Laws again—the discussion had to be re-hashed; all of which would have been avoided had the Chairman followed the rules.

The other case was in the Section on Hygiene. A guest failed to come but sent his paper. Some one else read it. The paper ran over the time limit; the chairman called time. Someone moved extension. A protest was raised. Protest was overruled. The By-Law was overridden and the paper read to the bitter end.

Again it was the fault of the Chairman. It was improper to admit the paper; it was equally improper to extend the time limit. Such action is only when done by unanimous consent, which was not possible in either case since a protest had been made. The Chairman should have made a ruling, stuck to his guns and called the next paper.

There is no use in having laws unless they are obeyed. Far better wipe them all out and let every Chairman run his Section to suit himself than have laws that only fetter the law-abiding and are ignored by the others.

The Secretary prints these rules on a front page of the program every year—and nearly every year one or the other of them is violated.

All of which is respectfully referred to the attention of the Chairmen and essayists for the 1931 meeting.

E. F. Howard.

DIPHTHERIA.

The State Board of Health reports that there were 1273 cases of diphtheria reported during 1930. All of these cases occurred in Mississippi. Of this number 1030 occurred in children under ten years of age. The Board calls attention to the fact that 85 per cent of these cases of diphtheria could have been prevented by three doses of anti-toxin given one week apart to each child.

It is interesting to note that the above total number of cases for 1930 was five hundred less than the number of cases reported for 1929. A little more energy on the part of the family physicians will easily reduce the amount of diphtheria for 1931 still more.

FIELD MEMORIAL HOSPITAL.

Acknowledgment is made of a very attractive invitation of the Staff and Graduating Class of the Field Memorial Hospital Training School for Nurses to attending the Graduating Exercises held Thursday evening, March 5, at 8 o'clock, in Town Hall, Centreville. The program was as follows:

1. Processional—Mrs. Eleanor F. Moore.
2. Invocation—Rev. F. L. McCue.
3. Solo—Mrs. James G. Carr.
4. Greetings from the Stag—Dr. R. J. Field, Chairman.
5. Address—Dr. Felix Underwood.

6. Class History—Miss Lucille Smith.
7. Class Prophecy—Miss Ione Smith.
8. Class Will—Miss Dorris McGraw.
9. Address.
10. Presentation of Diplomas and School Pin—Hon. D. C. Bramlette.
11. Florence Nightingale Pledge — Graduating Class.
12. Hymn.

The Class Officers were President, Julia Mae Jones; Vice-President, Dorris McGraw; Second Vice-President, Almena James; Secretary and Treasurer, Ione Smith; Historian, Lucille Smith.

NATCHEZ CHARITY HOSPITAL.

At the last monthly meeting of the Staff of the Natchez Charity Hospital, the operative and non-operative treatment of appendiceal abscess and ruptured appendices was freely discussed. The balance of favor seemed to be for the non-operative treatment as an immediate procedure.

It was brought out that in 16 cases of definite appendiceal abscess treated by constant infra-red heat, the soreness and mass gradually subsided and no patients were lost. These patients were advised to have the appendix removed after the inflammatory process had completely subsided.

Staff conferences are held each Friday at 5:30 P. M.

There has just recently been installed an attractive built-in filing cabinet sufficient to care for records of five years; also additional space for filing old records in an attractive and orderly manner.

ADAMS COUNTY.

Mrs. Presly Bisland, who with Mr. Bisland and their daughter, Miss Sally Bisland, have been spending several weeks in Natchez, has returned to her home in Bronxville, N. Y. She was accompanied by Mrs. J. D. Shields and Miss Caroline Shields, who will visit in the east with Mrs. Bisland. Mrs. Bisland, Mrs. Shields, and Miss Caroline Shields were joined in New Orleans by Mr. Dunbar Shields, who made the trip east with them.

Sympathy is extended to Dr. J. A. Rayburn, superintendent of the Natchez Charity Hospital, in the loss of his father, who died at Myrtle, Feb. 19, 1931.

L. Wallin.

KING'S DAUGHTER'S HOSPITAL, GREENVILLE.

At the last meeting of the Staff of the King's Daughter's Hospital, Greenville, the following case reports were presented:

1. Colitis—Dr. O. H. Beck.

   Discussed by Drs. J. G. Archer, C. P. Thompson, H. A. Gamble, and A. G. Payne.

2. Eclampsia. Treated by the use of Sodium Amytal Preliminary to Delivery — Dr. C. P. Thompson.

   Discussed by Drs. J. F. Lucas and J. B. Hirsch.

3. Chorea—Dr. F. M. Acree. (A paper.)

Officers were elected as follows: President, Dr. F. M. Acree; Vice-President, Dr. L. C. Davis; Secretary, Dr. J. C. Pegues Chief of Surgical Staff, Dr. H. A. Gamble; Chief of Medical Staff, Dr. C. P. Thompson; Chief of Specialties, Dr. R. C. Finlay.

EAST MISSISSIPPI MEDICAL SOCIETY.

Dr. T. L. Bennett, Meridian, reports that the regular meeting of the East Mississippi Medical Society was held in the Elks' Club, Merdian, on Thursday, Feb. 19, at 3 P. M., with 41 members and several guests present.

Three new members were elected—Dr. J. R. Plummer, Deemer; Dr. S. H. Davis, Burnside, and Dr. C. L. Perry, Philadelphia. All are from Winston County.

A series of educational publicity articles was brought before the Society for consideration. After some discussion, on motion of Dr. J. L. Parkes, it was voted to appoint a committee of three to investigate these articles and report at the next regular meeting. President A. L. Majure appointed on this committee Drs. J. L. Parkes, J. S. Hickman, and A. C. Bryan.

The following scientific program was presented:

1. Acute Otitis Media—Dr. H. L. Arnold, Meridian.

   Discussed by Dr. G. L. Arrington.

2. Perforated Peptic Ulcer with Report of Cases—Dr. R. H. Cranford, Laurel.

   Discussed by Drs. W. J. Anderson, A. C. Bryan, P. E. Holladay, H. L. Arnold and T. D. Bourdeaux.

3. Frequent Complications of Pregnancy—Dr. W. R. Holladay, Meridian.

   Discussed by Drs. Dudley Stennis, A. C. Bryan and J. S. Hickman.

4. Ambulatory Treatment of Fracture of the Lower Limb (Moving Pictures)—Dr. Leslie V. Rush, Meridian.

The next meeting of the Society will be held in Meridian on Thursday, April 16. At this meeting Dr. Gilbert F. Douglas, of Birmingham, Ala., will give a paper on "Injection of the Fallopian Tubes with Iodized Oil: Its Practical Value in Pelvic Pathology." The paper will be illustrated by lantern slides.

DR. JESSE HACKLEY RUSH

Whereas, Dr. Jesse Hackley Rush has gone from us never to return; and

Whereas, we realize fully that a great and good man has gone from among us and that the East Mississippi Medical Society has sustained a great loss in his passing; therefore, be it

Resolved, That in the death of Dr. Rush our Association has lost one of its most useful and untiring workers; and

Resolved, That his life, character, and devotion to duty to the medical profession and to the people demand our highest admiration and esteem; and

Resolved, That these resolutions be printed in our Official Organ and that a copy be sent to his family and that a page be set apart in our minutes in respect to his memory.

Respectfully submitted,

I. W. Cooper, Chairman;
Leonard Hart,
J. T. Bailey.
Committee.

DR. SAMUEL H. HAIRSTON.

Whereas, our Omnipotent Father has taken by death from us, Dr. Samuel H. Hairston, a valued and influential member of our Association; and

Whereas, we as individuals and as an association regret keenly and feel intensely the loss of our member, therefore be it

Resolved, That we express to the relatives of our deceased member our heartfelt and deep sympathy in their terrible bereavement, and be it further

Resolved, That these resolutions be published in the official organ of our association, that a copy be furnished the family of the deceased and that a page in our minutes be set apart out of respect to his memory.

Respectfully submitted

I. W. COOPER, Chairman,
W. R. HOLLADAY,
A. C. BRYAN,
Committee.

ISSAQUENA COUNTY.

Dr. J. B. Benton of Valley Park, representing this district on the Board of Supervisors, was in Mayersville several days during the past week attending the regular March meeting of that body.

Dr. W. H. Scudder, Mayersville, was a member of the grand jury during the regular spring term of circuit court held in Mayersville. It takes practically everybody in the county, doctors included, to hold a term of court in Issaquena.

W. H. Scudder.

SHARKEY COUNTY.

Dr. M. J. Few, Rolling Fork, and Miss Jennie McCuiston were quietly married Sunday morning, March 8, at Glen Ellen. They are spending their honeymoon in Hot Springs, Ark.

Mrs. H. S. Goodman, wife of Dr. H. S. Goodman, Cary, was elected historian at the district meeting of the Parent-Teachers Association.

Dr. W. C. Pool, Cary, attended the Tri-State meeting in Memphis, February 17-20.

Dr. S. T. Wells, Anguilla, is building a new home.

Dr. W. C. Pool.

LINCOLN COUNTY.

President F. E. Collins of the Tri-County Medical Society, has appointed a reporter from each county in his jurisdiction to assist "ye Editor" in getting news for the Journal, as follows:

Dr. W. L. Little, Wesson, for Copiah County; Dr. W. H. Frizell, Brookhaven, for Lincoln County; Dr. B. S. Waller, Silver Creek, for Lawrence County; Dr. B. L. Crawford, Tylertown, for Walthall County.

Of the active members of the profession in Lincoln County, all belong to the Tri-County Society except two whom we may get yet. Most of the members are interested in the Society but as elsewhere some only attend "turkey" meetings.

The Staff of the Brookhaven King's Daughters' Hospital meets regularly on the first Tuesday evening of each month at 7:30. Programs are always given by three members appointed one month ahead by the president. Attendance is usually good and interest is always manifest.

Dr. James A. McCallum, formerly of D'lo, removed from Brookhaven on Feb. 16, and is now attending the School of Instruction at Indianola, preparatory to doing special work for the State Board of Health. We shall expect a good report of him.

The Ladies Auxiliary of the Tri-County Society meets regularly with the Medical Society and holds interesting and helpful sessions.

The Tri-County (Copiah - Lincoln - Lawrence - Walthall) Medical Society met together with the Ladies Auxiliary at the Copiah-Lincoln Junior College, Wesson, that institution being the host. After a bountiful and well prepared dinner, the ladies and physicians inspected the various buildings and departments. At 2 P. M. we assembled in the amphitheatre where the music department gave several selections by the students for our entertainment. Superintendent Ellzey and his faculty and student body are most excellent hosts.

The entire body was addressed by Dr. Henry Boswell of the State Sanatorium on "Some Salient Points on Prevention of Tuberculosis," much o the enlightenment and good of the students.

Dr. H. C. Ricks, Director of the Bureau of Communicable Diseases, of the Mississippi State Board of Health, next gave a comprehensive exposition of some of the more common communicable diseases and their relative frequency and control. Dr. Ricks and his messages were both well received.

After this the society went into regular session and entered into round table discussion of influenza. Dr. W. H. Frizell opened with the definition, etiology and bacteriology; and was followed by Dr. Savage on the treatment of the different types. A general discussion followed.

Drs. F. V. McRee and G. R. Robertson, Brookhaven, were elected to Life Honorary Membership in the society.

Adjourned to meet in Brookhaven, June 9.

W. H. Frizell.

LAWRENCE COUNTY.

"The only medical news that I know is that Dr. S. E. Izard of New Hebron, had the misfortune to have a drug store and office burned on the night of Jan. 1, 1931.

'The Tri-County Medical Society met on March 10, at Wesson, the meeting being held in the auditorium of the Lincoln-Copiah Junior College."

B. S. Waller.

BOARD OF COUNTY EDITORS.

Your editors for Mississippi have sent to each President of our County Medical Societies the following letter, which is self-explanatory:

'A real journal means a great deal in the success of a medical society. Aside from the publication of scientific papers, one of its chief functions is to stimulate interest in the society and to keep the members in touch with each other and with their various activities. To do this effectively it is necessary to have notes of what is going on in every part of the State in every issue.

"Three men chosen by the State Association cannot cover the State each month alone. To remedy this defect and to make the official journal of the Mississippi State Medical Association really worth while to the Association and to every member of every County Society, we are forming a Board of County Editors, this Board to be appointed by the presidents of the various County Societies.

'The duties of the county editors will be to send in to the editor once a month all the news of the doctors and their families in their own counties. This does not let out the presidents and secretaries from furnishing reports of meetings of the societies. Our best material has come from presidents and secretaries. It is an effort to divide up the work and to cover more territory with greater efficiency.

'Will you not now appoint an editor for your society, picking a man who will really take the appointment seriously and do something, and send to me his name and address so that I may get in touch with him personally. I would also like to publish the names in the next issue of the New Orleans Medical and Surgical Journal.

"Thanking you for your co-operation and assuring you of our earnest desire to make your Journal of the greatest interest to you and to your members,

Sincerely yours,

YOUR EDITORS."

Your editors are deeply appreciative of the wonderful co-operation rendered by many of our members throughout the State. At the same time, we realize that our section of the Journal should cover ALL parts of the State. Hence, the new Board of County Editors.

The presidents of our societies are seeing our point and are responding in a fine manner. Some of their letters are certainly most encouraging. Those who have already made the appointments requested are Dr. C. W. Emerson, DeSoto County Medical Society; Dr. I. E. Stennis, Pike County Medical Society; Dr. A. L. Majure, East Mississippi Medical Society; Dr. C. E. Boyd, North East Mississippi Thirteen Counties Medical Society; Dr. H. F. Byers, Tate County Medical Society; Dr. Lucien S. Gaudet, Homochitto Valley Medical Society; Dr. J. V. May, Claiborne County Medical Society; Dr. Franklin E. Collins, Tri-County Medical Society; Dr. J. B. Benton, Issaquena-Sharkey-Warren Counties Medical Society; and Dr. A. P. McArthur, Jackson County Medical Society. Their appointments to the Board thus far received are as follows:

Adams County—Dr. L. Wallin, Natchez.

Alcorn County—Dr. J. R. Hill, Corinth.

Amite County—Dr. Paul Jackson, Liberty.

Calhoun County—Dr. J. A. Hardin, Derma.

Chickasaw County—Dr. W. C. Walker, Houlka.

Claiborne County—Dr. W. N. Jenkins, Port Gibson.

Clay County—Dr. S. R. Dean, West Point.

Copiah County—Dr. W. L. Little, Wesson.

DeSoto County—Dr. A. V. Richmond, Lake Cormant.

Franklin County—Dr. C. E. Mullins, Bude.

Issaquena County—Dr. W. H. Scudder, Mayersville.

Itawamba County—Dr. N. W. Nanney, Fulton.

Jackson County—Dr. B. S. McIlwain, Pascagoula.

Jefferson County—Dr. R. B. Harper, Fayette.

Lauderdale County—Dr. Charles T. Burt, Meridian.

Lawrence County—Dr. B. S. Waller, Silver Creek.

Lee County—Dr. A. J. Stacy, Tupelo.

Lincoln County—Dr. W. H. Frizell, Brookhaven.

Lowndes County—Dr. J. N. Lipscomb, Columbus.

Monroe County—Dr. G. S. Bryan, Amory.

Neshoba County—Dr. J. S. Hickman, Philadelphia.

Newton County—Dr. S. A. Majure, Hickory.

Noxubee County—Dr. J. D. Green, Brooksville.

Oktibbeha County—Dr. H. L. Scales, Starkville.

Pike County—Dr. L. J. Rutledge, McComb.

Pontotoc County—Dr. R. P. Donaldson, Pontotoc.

Prentiss County—Dr. R. B. Cunningham, Booneville.

Sharkey County—Dr. W. C. Pool, Cary.

Tate County—Dr. W. D. Smith, Senatobia.

Tishomingo County—Dr. K. F. McRae, Belmont.

Walthall County—Dr. B. L. Crawford, Tylertown.

Warren County—Dr. E. H. Jones, Vicksburg.

Wilkinson County—Dr. Sam E. Field, Centreville.

Winston County—Dr. M. L. Montgomery, Louisville.

The counties not yet represented on the Board are: Attala, Benton, Boliver, Carroll, Choctaw, Clark, Coahoma, Covington, Forrest, George, Greene, Grenada, Hancock, Harrison, Hinds, Holmes Humphrey, Jasper, Jones, Jefferson Davis, Kemper, Lafayette, Lamar, Leake, Leflore, Madison, Marion, Marshall, Montgomery, Panola, Pearl River Perry, Quitman, Rankin, Scott, Simpson, Stone, Sunflower, Tallahatchie, Tippah, Tunica, Union, Washington, Wayne, Webster, Yalobusha, Yazoo. Next month we hope to publish the name of editors for each of the above.

To all members of the State Association:

Your editors are trying very hard to give you a good Mississippi Section in our Journal. You are urged to inform your county editor of everything you or your family do or plan to do. Let's have a real friendly family party each month. Let's all have a share in our Journal.

FITE HOSPITAL.

Dr. P. L. Fite, Superintendent, Fite Hospital, Columbus, writes that he is adding ten new rooms to his hospital and making other needed improvements about the place.

NORTHEAST MISSISSIPPI THIRTEEN COUNTY MEDICAL SOCIETY.

Dr. J. M. Acker, Jr., Secretary, Northeast Mississippi Thirteen County Medical Society, reports that the regular quarterly meeting was held in the Y. M. C. A. Auditorium at A. & M. College, Starkville, on Tuesday, March 17, beginning at 2 P. M. The program was as follows:

Meeting called to order by Dr. C. E. Boyd, President.

Invocation.—Rev. J. H. Ray.

Reading and adoption of minutes of the last meeting.

Treatment of Eclampsia.—Dr. L. B. Morris, Macon. Discussion opened by Drs. Dean and Eason.

Prevention of Diphtheria.—Dr. W. H. Cleveland, Tupelo. Discussion opened by Drs. Love and J. D. Green.

A Paper.—Dr. Eugene J. Johnson, Memphis, Tenn.

Diagnosis and Treatment of Cervical Carcinoma. —Dr. W. H. Sutherland, Booneville. Discussion opened by Drs. Philpot and M. Q. Ewing.

Dr. E. F. Howard, President of the Mississippi State Medical Association, was the guest of honor and made an impressive address on the affairs of the State Association.

After a business sesion, the doctors and their guests were tendered a banquet in the A. & M. Cafeteria, with Dr. H. L. Scales, Starkville, as host.

The society was welcomed to Starkville by Dr. A. B. Butts, Vice-Presidenᵗ A. & M. College.

LAUDERDALE COUNTY.

After the death of Dr. S. H. Hairston, the Meridian Sanitarium has reopened under the management of Drs. K. T. Klein and A. C. Bryan. Both Drs. Klein and Bryan are limiting their practice to general surgery.

Dr. C. R. Stingily has direct control of both roentengen-ray and clinical laboratories.

The hospital doors are open to all reputable physicians and the institution has been successfully operated with full capacity since it was reopened.

Mrs. Iva W. Lovell is superintendent of nurses.

The Staff of the Anderson Infirmary met in regular session on February 13. The program included the following:

Nephrolithiasis with report of cases.

Heart Failure.—Drs. W. Jeff Anderson, H. F. Touchstone.

Tatum, W. W. Reynolds and B. L. Robinson.

Foreign Body in the Bronchus.—Dr. A. H.

Sixteen members were present at this meeting.

Dr. W. Jeff Anderson is a proud grandfather of William J. Anderson III.

Miss Frances Millery Burt, attractive six year old daughter of Dr. and Mrs. Charles T. Burt, Meridian, took part in an expression recital over radio station WCOC recently, giving a reading, "A Little Girl's Secret," and also taking part in a song. She also appeared in a pageant presented before the State Music Federation on March 16.

Charles T. Burt.

Dr. D. A. Pettit, Vicksburg, held a clinic on March 10 to demonstrate the use of diathermy in the removal of tonsils.

DELINQUENTS.

Dr. D. W. Jones, Councilor of the Mississippi State Medical Association for the Fifth District, is checking up on the membership of the various constituent societies in his territory. He is writing a personal letter to each former member of the various societies urging them to become affiliated again at once. He is also calling attention to the fact that if dues were not paid by Feb. 1, the member became delinquent as to the Medico-Legal Defense Fund until such dues are paid and if a suit is filed while delinquent, the Council cannot enter into the defense. These suits are becoming common and it is important for all reputable physicians to keep in touch with the State Medical Association on that account as well as for the more material benefits of organization.

NESHOBA COUNTY.

"We belong to the East Mississippi Medical Association, and we feel very glad indeed to report that we have fourteen doctors in this county, all of them not actively engaged in their profession, but all interested enough that they are members in good standing with the East Mississippi Medical Association, and this in turn places them in good standing with the Mississippi State Association, which gives us its benefits and protection.

"We believe this 100 per cent organization is due to the fact that our President of the State Medical Association made a rule to place the membership campaign on the vice-presidents of each county, and this membership is the major qualification for the next president for our society. In other words, it makes it a competitive proposition, and unless some one wanted the respective places in our societies, we would very likely have a dead society.

'The doctors from this county attended the East Mississippi Medical Association, which meets every other month at Meridian, as follows: Dr. W. R. Hand, Dr. A. L. Majure, and Dr. J. S. Hickman.

"Dr. Charlie Harrison attended the Tri-States Medical Association meeting at Memphis.

"Dr. W. H. Banks, who has been in very bad health for the past two months, has greatly improved, and is now back at work at Coldwater community.

"Dr. M. E. Cole who has also been on the sick list is now regaining his health.

"The Neshoba County Medical Fraternity met at Philadelphia the second Tuesday in February, and all enjoyed a refreshing and satisfying supper at the Dobbs Hotel. We had a wonderful meeting.

"The purpose of this organization is to keep a closer and better understanding with one another, and to do this, we learn quite a good deal about the people for whom we work. This is more of a business organization than otherwise, and we believe it makes the right sort of impression on the laity, at least, it gives them to understand that we are together, and not scrapping one another, as the old doctors used to do."

J. S. Hickman.

Dr. A. Street, Vicksburg, attended the Second Annual Assembly of the Southeastern Surgical Congress at Atlanta, Ga., March 9 and 10.

ACKNOWLEDGMENT

Acknowledgement is made of "A Brief History of Public Health and Medical Licensure of the State of Mississippi." This compilation, covering the period from 1799 to 1930, was prepared by Felix J. Underwood, M. D., Secretary and Executive Officer, and R. M. Whitfield, M. D., Assistant Secretary, of the Mississippi State Board of Health and sent to the editor with the compliments of Dr. Underwood. It contains many facts of interest which are set forth in an especially excellent manner and should prove of much value to every physician in Mississippi. Incidentally it brings out in an emphatic way the remarkable development of public health in Mississippi. Congratulations to every one who has had a part in this good work.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY.

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Y. M. C. A., Vicksburg, March 10. The scientific program included the following:

Parathiocresol Treatment of Chronic Ulcera.—Dr. W. H. Parsons. Discussed by Drs. F. M. Smith, L. S. Lippincott, and J. B. Benton.

State Medicine.—Dr. E. F. Howard. Discussed by Drs. D. P. Street, E. H. Jones, P. S. Herring, F. M. Smith, H. H. Haralson, and W. H. Scudder.

The secretary reported that in response to the invitation of this society to the Central Medical Society to hold two joint meetings this year, Secretary W. L. Hughes of the Central Medical Society answered that such joint meetings were desired.

It is probable that one meeting will be held in April and one in July. One meeting is to be held in Jackson and the other in Vicksburg.

Dr. H. H. Haralson for the committee appointed by the president, presented resolutions on the death of Dr. J. P. O'Leary, which were adopted.

On February twenty-third of this year Dr. J. P. O'Leary, age sixty-one years, died in Vicksburg where he was born and practiced his profession for about forty years.

Resolved that in the death of Dr. O'Leary the Issaquena-Sharkey-Warren Counties Medical Society has lost one of its best beloved members, and Vicksburg and the State of Mississippi one of its most useful citizens.

Resolved, that he was a physician of sterling worth and a gentleman of strict integrity and honor, a loving spirit and a true devoted and unselfish friend.

Resolved, that we tender his beloved family our sincerest sympathy.

H. H. HARALSON, Chairman.
S. W. JOHNSTON,
J. S. EWING,
Committee.

Vicksburg, Miss., March 10, 1931.

WARREN COUNTY.

Dr. Hugh Johnston, who has a fellowship at the Mayo Clinic, recently spent two weeks with his family and friends in Vicksburg.

The Vicksburg Infirmary held its regular Staff Meeting on March 4.

Dr. G. P. Sanderson, Vicksburg, and Dr. W. C. Pool, Cary, attended the meeting of the Tri-States Medical Association in Memphis during the latter part of February. They reported an excellent meeting and that one of our outstanding Mississippi men, Dr. A. G. Payne, Greenville, was elected vice-president of the association.

Dr. M. J. Few and Miss Jennie McCuiston surprised their friends by quietly getting married on Sunday, March 8. They have our best wishes and we hope they do not even need them.

Edley H. Jones.

VICKSBURG HOSPITAL.

Dr. E. H. Jones, Secretary, reports that the regular meeting of the Staff of the Vicksburg Hospital was held on February 12, and that the following program was rendered:

Routine business.

Report on meeting of American College of Surgeons.—Dr. I. C. Knox.

Headaches Due to Eye Strain.—Dr. E. H. Jones.

Lunch.

The Staff holds its regular meetings at 7 P. M. on the second Thursday of each month. The profession is cordially invited to attend.

VICKSBURG SANITARIUM.

The regular monthly meeting of the Staff of the Vicksburg Sanitarium was held on March 9. After the business of the Staff and reports from the records department and analysis of the work of the hospital, the following special case reports were presented:

Peritoneal Cyst Showing in the Fluid a Gram Negative Diplococcus.—Dr. J. A. K. Birchett, Jr.

Encephalitis, With Autopsy Findings.—Dr. L. J. Clark.

Meningococcic Meningitis, With Autopsy Findings.—Dr. G. C. Jarratt.

A Brief Discussion of Asthma From the Allergic Viewpoint; Report of an Interesting Case.—Dr. E. H. Jones.

The following selected radiographic studies were shown: Subdeltoid bursitis; a typical spondylolisthesis; supperative pleurisy; tuberculosis with pulmonary abscess; liver abscess; carcinoma of stomach; low esophageal obstruction; cholelithiasis (two cases); hydroureter; ureteral calculus.

DEATHS OF PHYSICIANS, FEBRUARY, 1931.

J. S. Adams, Sumrall. Pneumonia following accidental burns in December; February 5, at Hattiesburg; born Moscow, Miss., September 29, 1878.

William G. Dorroh, Madison. Cerebral apoplexy, February 5, at Madison; born Green County, Ala., August 27, 1870.

John T. O'Leary, Vicksburg, February 23, at Vicksburg; born Vicksburg, May 24, 1870.

Reese S. Wooley, McCall's Creek. Cerebral hemorrhage, arterio-sclerosis, February 2, at Natchez; born Lincoln County, June 2, 1870.

W. L. Hughston, Ethel, February 27, at Ethel; born French Camp, February 6, 1868.

Russell McKinley, Columbus. Bronchal pneumonia, January 4, at Columbus; born Alabama, August 3, 1872.

MEDICAL SCHOOL.

Dr. P. L. Mull, Dean of the Medical School, University of Mississippi, under date of March 15, announced the action of the Council on Medical Education and Hospitals of the American Medical Association concerning the standing of the school. Dr. Mull, accompanied by Drs. J. C. Culley and Billie Guyton of Oxford and Hon. Martin Miller, of Meridian, representing the Alumni Association of the University, recently appeared before the Council at a meeting in Chicago in the interest of provisionally continuing the school on the approved list. The decision of the council is contained in Bulletin 39, as follows:

"2. University of Mississippi School of Medicine. Early in 1930 reports were received indicating that sweeping changes, probably through political maneuvering, had been made in the faculty of this school. The Council at once recognized the seriousness of this situation and called the governor's attention to the fact that the institution recognized by this Council no longer existed in fact, and that before a new institution could be recognized it would need to be thoroughly inspected.

'This was followed by the prompt restoration of most of the original personnel to their positions on the medical faculty. At its business meeting on October 15, 1930, therefore, the Council voted that the approval of this medical school be held in abeyance until the effect of the recent changes could be determined. Since that time the Council has received considerable correspondence from prominent physicians and others in Mississippi requesting the Council to hold the approval of the school in abeyance until the next Governor and Legislature of Mississippi are elected, which will be in January, 1932, after which it is expected that favorable developments will occur. After due consideration the Council at its meeting of February 15, 1931, voted that the approval of the school be continued provisionally pending further developments."

BOOK REVIEWS

Historic Artificial Limbs: By Vittorio Putti. New York, Paul B. Hoeber, Inc. 1930. 11 illus. pp. 63.

Martin asks Godfrey's name and the warrior offers him his left hand. "Why do you offer me the left hand?" asks the offended Martin. "Am I not worthy of knightly courtesy?" Godfrey answers, "Were you the emperor himself you must be content with this. My right, though not useless in war, is insensible to the pressure of love; it is part of my glove; you see, it is iron." Then Martin suddenly stoops to kiss this iron hand which reveals to him the name and heroism of the famous captain.

The foregoing, and many equally delightful tidbits, culled from the Latin, German and English literatures, make this all too short treatise on artificial limbs a rare pleasure.

Putti has explored a hitherto uncharted field of medical lore. He traces the development of prosthetics and attempts to correlate the perfecting of mechanical limbs with contemporary history. He analyzes a number of famed relics and shows the influence of the artisan and the artist. Some are useful, others are ornamental as well as useful, still others are only ornamental.

The following historic members are mentioned or described: The iron hand of Goetz of Berlichingen (1480) the iron hand in the Imperial Museum at Berlin (15th century) the Neu-Ruppin hand (which antedates the 15th century) the hand owned by Count Hans Wilczwk of Vienna which is of French origin, the wooden hands in the Deutsches Museum in Neuremberg, the wooden pilon of the Gallo-Roman Epoch, the pilons in the Talmud, the wooden leg of Egesistratus, the iron hand that Sergius made for himself during the second Punic war, the Stibbert collection in Florence.

Anyone interested in medical history should welcome this priceless contribution. Incidentally it might serve a useful purpose in an orthopedist's waiting room.

MAURICE SULLIVAN, M. D.

A Textbook of Gynecology: By Arthur Hale Curtis, M. D. Philadelphia, W. B. Saunders Company. 1930. Pp. 380.

This book reminds one of a heart to heart talk with an author rather than a stereotyped repetition of other men's opinions and what they have done. The author's frankness is refreshing and the fact that every imaginable treatment of conditions is not dwelled upon allows one to gain a vivid concept of gynecological diseases as he sees them. This work would be an asset not only to the library of the student and recent graduate but, also, to the library of one long since a student; however, it is not detailed and presumes knowledge of fundamentals. The illustrations, most of which are by Tom Jones, are excellent and the concept one obtains a sequence of steps in those illustrating operative technic is almost perfect. A textbook by the author on obstetrics treated in a style similar to this work would be welcomed by the profession.

J. W. WILLIAMS, M. D.

Arterial Hypertension: By Edward J. Stieglitz, M. S., M. D. New York, Paul B. Hoeber, Inc. 1930. pp. 280.

A very interesting book, written in a careful style and one easy to read. The subject is covered in a most pleasing manner and good discrimination is shown in touching lightly such details as are of minor interest, and in dwelling on those of interest and importance. In the early chapters, the author discusses anatomy, physiology of the circulation, and those passages devoted to the "mechanics and physics," so to speak, of hypertension are of considerable interest. The discussion of etiology offers no new concepts. The multiplicity of the various agents is carefully reviewed and the susceptibility of some and refractoriness of others to correction is discussed. In discussing the symptomatology the author again warns against the fact that early, and occasionally, hypertension of fairly long standing, presents no symptoms. The various symptom groups, viz: the cerebral, cardio-circulatory and the renal are described. The chapter on treatment includes mention of the various agents in use at present. Many colleagues will not concur with the author's opinion that the iodides are contraindicated. He denounces too free purgation as well as too conservative use of digitalis. He firmly gives his opinion, in this and in subsequent chapters, on the importance of slowing the pulse rate by using fairly large doses of digitalis. Bismuth subnitrate seems to have produced unusually good results in some of his cases. He repeats the very important statement that "therapy in hypertension must be fundamentally individualistic." Various conditions affecting the prognosis are carefully considered. Group prognosis and prognosis in the individual cases are reviewed. Use is made of statistics from insurance companies and very likely these statistics supercede others in accuracy. Chapters are devoted to the all-important factors of cardiac and renal reserve; the former reviews various conditions leading to myocardial damage and subsequent failure, and

offers many helpful hints in prevention and treatment. In estimating the amount of cardiac reserve, the importance of being guided by functional capacity, or response to work, rather than by anatomic changes, is duly emphasized. The silent progress of renal damage in the earlier phases of hypertension is warned against. The various functional tests are reviewed with some detail. The author, like many others, prefers the concentration test. Prophylaxis and all aspects of treatment of the renal phase are discussed. The concluding chapter deals with the complex topic of hypertension in pregnancy.

Briefly, this book will prove most instructive to students, and interesting and refreshing as well as instructive to internists.

JOHN J. ARCHINARD.

Modern Surgery: By John Chalmers DaCosta, M. D., LL. D., F. A. C. S. 10th ed. rev.. Philadelphia, W. B. Saunders Co., 1931. Pp. 1404. illus. pl.

For the tenth edition of his "Modern Surgery," John Chalmers DaCosta has personally revised every chapter with the exception of the section by Dr. Chevalier Jackson, which stands untouched. The revision has been very complete and represents a painstaking selection from current surgical literature to bring the text up-to-date. Dr. DaCosta has attempted to make a conservative and logical resume of the worthwhile advances and has necessarily held on to many old concepts of surgery as well.

It has always been a slight disappointment to friends of this excellent work that the illustrations have not been somewhat more modernized, especially in regard to the photographs of extreme pathological conditions.

With the ever-increasing stupendity of surgical literature, the task of compiling a representative one-volume surgical text is constantly becoming more difficult. As ever, this present revision admirably serves to keep DaCosta's "Modern Surgery" in its place as one of the most outstanding surgical texts.

EARL GARSIDE, M. D.

Legal Medicine and Toxicology: By Ralph W. Webster, M. D., Ph. D. Philadelphia and London, W. B. Saunders Co. 1930. Pp. 861.

This work should be of inestimable value to all persons concerned with Legal Medicine and Toxicology such as physicians, attorneys, jurists, district attorneys, life, health and accident insurance adjustors, chemists, etc. It is concise and to the point, the language is simple and the illustrations almost self-explanatory.

The subject matter is divided into an introduction and two parts. The Introduction deals with definitions, ordinary and expert witnesses and legal proceedure; Part I deals with Legal Medicine and Part II with Toxicology. Part I emphasizes sufficient important clinical and pathological data to allow the legal phase of medicine to savor of and appear important in medicine and its teachings. Part II discusses all important types of poisonings which may be encountered by the physician and details symptoms, treatment, morbid anatomy and means of indentification of the individual poisons.

The book is an excellent reference, a valuable laboratory guide and a concise preparatory text for use in examinations on the subject. The sequence of subjects is logical and the divisions of the parts would be hard to improve upon. The volume is well bound, of good size and the print and paper are of excellent quality.

J. W. WILLIAMS, M. D.

Clinical Allergy, Particularly Asthma and Hay Fever: By Francis Rackemann, M. D. New York, The Macmillan Co. 1931. pp. 607.

This monograph is the most detailed and complete treatise on the subject that has been published to date. The monograph is divided into two parts, the first section dealing with the phenomena of hypersensitiveness, and the second with the clinical manifestations of allergy. The tremendous amount of experimental work that has been published on this subject has been carefully digested, and impartially and lucidly presented, so that the general practitioner as well as the specialist in applied immunology and other fields may understand in a very short time the experimental background in allergic diseases.

The second part discusses in detail hay fever and asthma. The treatise is based on an analysis of 1074 patients treated at the Massachusetts General Hospital. The chapters on hay fever, vasomotor rhinitis, and asthma, are particularly rich in information. In order not to confuse the practitioner, the author describes his own methods of diagnosis and treatment, and lists the methods of other writers separately. Etiological factors are clearly set forth. Failures and successes are impartially set down. It is true that many will not entirely agree with Rackemann's opinions concerning bacterial asthma; however, the experimental evidence cited is far from unconvincing. The author has certainly cleared up a great many obscurities of vaccine therapy by his presentation of the subject. The skin tests are very well described, and their value noted. It is the reviewer's opinion that the author has not laid sufficient

stress on importance of house dust as an etiological factor in hay fever and asthma.

There are also chapters on urticaria, erythema multiforme, eczema, and migraine. Each chapter is followed by a lengthy bibliography.

B. GELFAND EFRON, M. D.

Common Infections of the Female Urethra and Cervix: By Frank Kidd, M. A., M. Ch. (Cantab.), F. R. C. S. (England) and A. Malcolm Simpson, B. A., M. B., D. P. H. (Cantab.), London, Oxford Univ. Pr. 1929. Pp. 197.

This is indeed an excellent resume upon a most important subject. Not only is it sufficient for the gynecological specialist, but is concise enough for the general practitioner.

The contents of this volume are well sub-divided, and the style of the authors is so typical of many English texts—easy and flowing.

An excellent section is that which deals with the instructions to the patient with gonorrhea. Another well written chapter is that which deals with gonoccocal arthritis.

In their chapter on prophylaxis, the authors give advice to the male of the species, and cite many cases showing the value of the British navy prophylactic packets. To the average physician, however, the discussion is a bit broad. A word of advice on this topic is also given for the female.

In the section dealing with the treatment of cervicitis, too much stress is laid upon the use of chemicals, and, from the American viewpoint, not sufficient upon the use of the thermo-cautery.

All in all, however, a concise volume and one to be highly recommended.

WALTER E. LEVY, M. D.

Recent Advances in the Study of Rheumatism: By Frederic John Poynton, M. D., F. R. C. P. (Lond.), and Bernard Schlesinger, M. A., M. D. (Camb.), F. R. C. P. Philadelphia, P. Blakiston's Son & Co., Inc. 1931. pp. 313.

This treatise adds another worthy member to "The Recent Advance Series." Poynton and Schlesinger emphasize the formidable problem before the profession in their attack upon and solution of "rheumatic diseases"' not only from a medical standpoint but from an economic one as well. The book is divided into three parts. Part I deals with nomenclature and industrial aspect, Part II with acute rheumatism, and Part III with chronic rheumatism. The assembled data of the recent work on the subject is excellently handled and correlated and one emerges from perusal of the volume refreshed in knowledge of rheumatism and with a splendid idea of its details and the barriers in the way of its better understanding. Dr. Frank Howitt, C. V. O., M. D., M. R. C. P., adds an excellent chapter on physio-therapy. This work should prove very popular and should stimulate a much needed interest in this disease in medical circles.

J. W. WILLIAMS, M. D.

Textbook for Midwives: By John S. Fairbairn, M. A., B. M., B. Ch. (Oxon.), F. R. C. P. (Lond.), F. R. C. S. (Eng.), Mast. Midw. Soc. Apoth. (Lond.). 5th ed. London, Oxford Univ. Pr. 1930. pp. 369.

Let it first be said that this is a most complete and comprehensive book for the midwife showing the high standard that is maintained in the British Isle.

However, it also contains many practical points for the physician for it deals entirely with the home delivery. Chapters IX and X which deal with the physiology and mechanism of labor present these subjects in a simplified manner. The latter part of Chapter XV dealing with the management of breech presentation has several enlightening points.

Of particular interest is the first part of Chapter XXVII which deals with asphyxia neonatorum—not because it contains anything new but because of its simplicity.

Frequent reference is made to C. M. B. (Central Midwives Board) rules and this district one who is not reading the book from that point of view, but they are excellent rules to be applied to all midwives.

P. GRAFFAGNINO, M. D.

Modern Methods of Treatment: By Logan Clendening, M. D. 4th Ed. St. Louis, C. V. Mosby Company. 1931. pp. 819.

The rapid appearance of the successive editions attest to the well-deserved popularity of Dr. Clendening's book. The text is comprehensive, authoritative, and representative of the latest views. It may be repeated here, what was said in a review of a previous edition, namely, that Dr. Clendening has presented his material in an interesting and even entertaining manner. Only minor criticisms are made, such as the fact that in certain instances the instructions are not definite enough, such as, for example, the strength of the solution of sodium thiosulphate in the treatment of arsenic and mercury poisoning. The quantity of the drug is stated, but not the strength of the solution. The reviewer is still inclined to believe that the simple presentation of one definite method of diet calcu-

lation for diabetes would be less confusing than the author's present method of offering a number of alternative methods. The casual use of the index has revealed a number of inaccuracies. The book is one of the most practical value to the practitioner.

I. I. LEMANN, M. D.

Clio Medica: Physiology: By John F. Fulton, M. D. Edited by E. B. Krumbhaar, M. D. New York, Paul B. Hoeber, Inc. pp. 141.

One of a series of handbooks on the history of medicine. This volume presents the chronological narrative of the development of the science of physiology. Beginning with the ancients, Aristotle and Galen, the subject is brought up to the present day. One learns of what is probably the earliest physiological observation on record, a treatise possibly written by the Egyptian surgeon, Imhotep, in the year 3000 B. C. Thoroughly interesting it furnishes a few hours of delightful and profitable reading and stimulates one to read further into the ramifications of this fascinating subject. To facilitate this probable result the author has attached a complete bibliography of the subject matter.

WILLARD R. WIRTH, M. D.

General Medicine, Series 1930: Edited by Drs. George H. Weaver, Lawrason Brown, George R. Minot, William B. Castle, William D. Stroud, and Ralph C. Brown. The Practical Medicine Series. Chicago, The Year Book Publishers. pp. 848.

This compact volume on general medical subjects represents the condensation of important information from the literature of the world by the eminent editors during the interval since the previous annual series. The subject matter is handled and classified under separate headings, each edited by a man who is an authority upon that particular branch of medicine. Infectious Diseases, by George H. Weaver and T. T. Crooks; Diseases of the Chest, by Lawrason Brown; Diseases of the Blood and Blood-Making Organs; Diseases of the Kidney, by George R. Minot and William B. Castle; Diseases of the Heart and Blood Vessels, by William D. Stroud, and Diseases of the Digestive System and Metabolism, by Ralph C. Brown.

Such a book allows one to review in a comparatively short time all the valuable new developments and knowledge on a particular subject. It brings one up to date by a review of literature which the practitioner of medicine could do in no other way.

The source of each article abstracted is given at the bottom of the page, and in addition there is a complete index of subject matter and an index to authors.

Of particular interest to the reviewer were the articles on the etiology of psittacosis, the use of amytal compound in the paroxysms of whooping cough, the use of amidopyrin in measles, glucose with insulin in the myocardial failure of diphtheria, the discussion of the essentials for the exclusion of tuberculosis, coin test over cavities and pneumo-thoraces, treatment of lobar pneumoina, nomenclature of cardiac diagnoses, essential hypertension and many other important reviews.

The book is very well done and should be of great value to the internist and general practitioner, both as a facile review of the annual literature and as a reference text.

WILLARD R. WIRTH, M. D.

Bioassays: A Handbook of Quantitative Pharmacology: By James C. Munch. Baltimore, Williams & Wilkins Co. 1931. pp. 958.

As the title would indicate this compendium of knowledge appeals more to the physiologist and research worker than to the average busy physician with its many pages of detailed technic for demonstrating the therapeutic activity of drugs which affect the nervous system, the circulation, the respiration and the musculature. Three special chapters deal extensively with many special properties of drugs (anthelmintics, antipyretics, cathartics, etc.), the glandular products and the vitamines.

It is interesting to compare the bioassays of such a widely advertised gland as "anterior pituitary" or "ovarian substance" what it can be scientifically "assayed" to do. Indeed many claims of the "detail man" in person or through the mails will not be found within the covers of this exhaustive compendium of the world's literature on therapeutic materials.

As a reference work some 1226 articles are referred to and the references are listed in tables according to their therapeutic groups.

F. M. JOHNS, M. D.

Slit-Light Microscopy of the Living Eye: By F. E. Koby, M. D. 2d Ed. Philadelphia, P. Blakiston's Sons & Co. 1930. pp. 360.

The rapid re-appearance of a second edition of this excellent work shows that English-speaking ophthalmologists are interest in the slit-light, and that a relatively large number of new ideas and findings have greatly supplemented our knowledge of but a few years ago.

Color differences of the eyes (heterochromia iridis) although sometimes congenital, are more frequently due to very slight chronic uveal inflammation, often tubercular. A rarer form is associated with paralysis of the cervical sympathetic. With the slit-light, these can now usually be differentiated.

The character and evolution of corneal precipitates not only often give strongly suggestive information concerning the type and even location of the extra ocular toxic focus, but also the duration of its action.

One can usually determine the cause of any cataract (congenital, traumatic or from disease), as well as the prognosis and result that could reasonably be expected from an operation. Some forms of zonular cataract are specifically caused by para-thyroid disfunction, this occurring most frequently between the second and fourth years, and is determined by the layers of the lens involved. Knowing when the various zones are developed, one can sometimes determine with uncanny accuracy when a lens opacity was produced. Vogt and Lussi were able to correctly diagnose myotonic dystrophy (syndrome of Steinert) by a single examination with the slit-light. In some skin diseases, the associated lens opacity is also diagnostic.

In the understanding of some unusual observations progress is also recorded, for example, Stahli's corneal line now known in Bowman's membrane, is apparently associated with winking under some pathological conditions. Fleisher's ring which is characteristic of cornical cornea depends on a rupture of Bowman's membrane. Kayser's ring which is an ocular symptom of hepato lenticular degeneration (Wilson's disease) is essentially due to pigment of undetermined origin deposited near Descemet's membrane. Krukenberg's spindle is apparently due to mobilization of uveal pigment deposited on the posterior cornea in a characteristic manner, because of aqueous currents and some unknown structural factor in the corneal endothelium.

These and many other interesting and potentially important ideas are discussed in the present edition which is fairly well illustrated and very well indexed.

CHAS. A. BAHN, M. D.

Textbook for Nurses: Anatomy, Physiology, Surgery and Medicine: By E. W. Hey Groves, M. D., B. Sc., M. S., F. R. C. S. (Oxon.), M. R. C. P. (Lond.). Medical section revised by J. A. Nixon, C. M. G., M. D. (Cantab.), F. R. C. P. (Lond.). London, Oxford University Press. 1930. pp. 641.

This treatise for nurses is a comprehensive perusal of the subject matter necessary for the better understanding of their duties. It is concise and written in simple language. No nurse who made it her aim to absorb and understand the subject matter contained in this volume could blame her lack of success to lack of fundamental knowledge of her subject. The authors handle their data in logical sequence and in a manner which is easily grasped by one who lacks college training. The illustrations are sufficiently fundamental, detailed and frequent to explain facts which the subject matter alone might leave obscure. The book is well printed and illustrated and the materials used are of excellent and durable quality. The book is to be highly recommended in this, its Fourth Edition.

J. W. WILLIAMS, M. D.

PUBLICATIONS RECEIVED.

W. B. Saunders Company, Philadelphia: Selections from The Papers and Speeches of John Chalmers DaCosta, M. D., LL. D.

P. Blakiston's Son & Co., Philadelphia: A Textbook of Laboratory Diagnosis, by Edwin E. Osgood, M. A., M. D., and Howard D. Haskins, M. D.

F. A. Davis Company, Philadelphia: Textbook of Human Embryology, by Cleveland Sylvester Simkins, Ph. D.

Oxford University Press, New York and London: The Treatment of Chronic Deafness, by the Electrophonoide Method of Zund-Burguet, by George C. Cathcart, M. A., M. D. An Introduction to Pharmacology and Therapeutics, by J. A. Gunn, M. D.

Printcraft Publishing Co., Portsmouth: A Century with Norfolk Naval Hospital 1830-1930, by Richmond C. Holcomb, M. D., F. A. C. S.

The John Day Company, New York: Easier Motherhood, by Constance L. Todd.

Charles C. Thomas, Springfield: A Textbook of Surgery, by John Homans, M. D.

Miscellaneous—W. L. Kitchens, M. D. Texarkana: Symptoms and Diseases Applied, by Dr. W. L. Kitchens.